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ABSTRACT

This report covers the second year of work by the National Center for Research in Vocational Education in assisting states to increase their ability to evaluate programs and services for special populations. The report also provides information on changes that have occurred in the total evaluation system of the participating states since the start of the project. The project procedure was to determine the extent to which a state was able to provide the necessary information to determine program effectiveness in serving individuals within these special groups identified by the Education Amendments of 1976: disadvantaged persons, handicapped persons, women, minorities, and persons with limited English proficiency. This set of information relates to the accessibility of programs, participation of special population individuals, the additional services provided, and the outcomes achieved. Following this analysis, each state was assisted to develop a plan for correcting the identified weakness and to specify the aid that the National Center team could provide. The publication gives a report on this process and the resultant improvements made in the states. The states aided were Alabama, Colorado, Maine, California, and Connecticut. (KC)

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IMPROVING STATE EVALUATION OF PROGRAMS AND SERVICES FOR SPECIAL POPULATIONS IN VOCATIONAL EDUCATION

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U.S. DEPARTMENT OF EDUCATION
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FOREWORD

The National Center for Research in Vocational Education has provided technical assistance in evaluation to selected states over the past two years. This report covers the second year's work, which was designed to assist states in increasing their ability to evaluate programs and services for special populations. The report also provides information on changes in the total evaluation system of the participating states which have occurred since the start of the project.

The project procedure was to determine the extent to which a state was able to provide the necessary information to determine program effectiveness in serving individuals within these special groups (disadvantaged, handicapped, women, minorities, and persons with limited English proficiency) identified by the Education Amendments of 1976. This set of needed information relates to the accessibility of programs, participation of special population individuals, the additional service provided, and the outcomes achieved.

Following the above analysis, each state was assisted to develop a plan for correcting the identified weakness and to specify the aid which the National Center team could provide. This publication gives a report on this process and the resultant improvements made in the states.

The National Center is particularly indebted to Bill Stevenson, Project Director, Marion Franken, Research Specialist, and Graduate Research Associate, Eliseo Ponce. Significant contributions to the project were also made by N. L. McCaslin, Associate Director, and F. L. McKinney, Program Director of the Evaluation and Policy Division, where the project was conducted.

Recognition and appreciation are extended to the evaluation coordinators in each state who were the main contacts for the technical assistance team. Ernest Neasham and William Morris in California, Betty Schmidt in Connecticut, Lloyd Lawson, Robert Perry, and James Harris in Colorado, and Douglas Patterson and his staff in Alabama were most helpful in assisting the project staff while in the states. Other staff in each of the states freely shared their knowledge and expertise with the project team.

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Robert E. Taylor
Executive Director
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Research in Vocational
Education

CHAPTER I

INTRODUCTION

This chapter presents the importance, objectives, and methodology of the project. It also discusses the development of the assessment instrument which was used to rate the states' ability to evaluate programs and services for special populations in vocational education.

Importance of the Project

The Education Amendments of 1976 mandated that state boards evaluate, among other things, results of additional services that states provide to special populations in terms of "planning and operational processes, results of student achievement, and results of student employment success."[1] Special populations include women, members of minority groups, disadvantaged and handicapped persons,[2] and persons of limited English-speaking proficiency.

The law has, therefore, added a new dimension to vocational education evaluation. It requires states to evaluate special populations enrolled in vocational education on the same basis as regular vocational students. This means that a fully functioning state vocational evaluation system should be able to compare or contrast regular and special population students on certain criteria.

A recent study conducted by the leadership development function of the National Center revealed that state vocational education directors[3] considered evaluation as their number one priority. The project staff conducted another informal study among state directors of vocational education and other state staff[4] to prioritize the areas of needed assistance. Questions dealing with special populations represented three of the six most pressing problems. These three areas of concern at the state level were (1) determination of special services for special populations, (2) follow-up of special populations, and (3) determination of needs of special populations.[5]

The National Center began to assist the states in solving the foregoing problems during 1978-79 through technical assistance to selected states. During Year I, the National Center for Research in Vocational Education established working relations with four states--California, Maine, Colorado, and

Alabama. Each of the four states had indicated a need for assistance in evaluating programs and services for special populations. The results of this effort were previously reported by Stevenson et. al.[6]

Objectives

The objective of this project in Year 1I was to provide technical assistance to four states directed toward the improvement of the evaluation of programs and services for special populations.

The performance objectives in terms of product were to increase the ability of the participating states to

1. determine accessibility of programs to special needs populations;
2. determine participation of special populations in vocational programs;
3. identify services provided to special populations;
4. determine outcomes of programs for special populations.

Performance objectives in terms of process primarily described what the project team attempted to accomplish in achieving the overall objective and the product objectives. These activities included

1. analyzing states' ability to evaluate programs and services for special populations;
2. providing technical assistance to four states on evaluation of programs and services for special populations;
3. developing a prioritized list of evaluation for special populations;
4. providing strategies for evaluation system modification;

5. developing procedures for self-analysis of a state evaluation system.

One of the most important outcomes in the process of providing technical assistance is increasing in the participating states' knowledge of their effectiveness in serving special populations. It was hoped that this increased awareness would result in the improvement of services and programs for these groups and thus effectively provide occupational education and training for individuals classified as special populations.

Given the greater goal of assisting states in the development of a more responsive evaluation system for vocational education, this technical assistance effort was viewed as one mechanism for delivering the knowledge, experience, and cumulative findings of the National Center to the field. The technical assistance team can relay information and concerns from the field back to the National Center staff. This information could include results of, and, reactions to the products produced by the National Center, needs for additional research and development, and the extent to which the overall goals of the evaluation function of the Evaluation and Policy Division are being achieved.

Methodology

The methodology of the Technical Assistance Project was influenced by the work of Everett Rogers and Floyd Shoemaker,[7] especially that on diffusion of innovations. Ronald Havelock's "The Change Agent's Guide to Innovation in Education"[8] proved to be very helpful.

The process of providing technical assistance involved six sequential, interlocking phases. These were (1) assessing needs, (2) prioritizing needs, (3) identifying alternative solutions, (4) choosing solutions, (5) implementation, and (6) evaluating implementation. Figure 1 shows the schematic diagram of the process by which the Technical Assistance Project provided technical services to states. Figure 2 shows the schedule of activities.

Prior to the actual process of providing technical assistance was the selection of cooperating states. The four states (California, Colorado, Alabama, and Maine) participating in Year I of the project were contacted to determine whether or

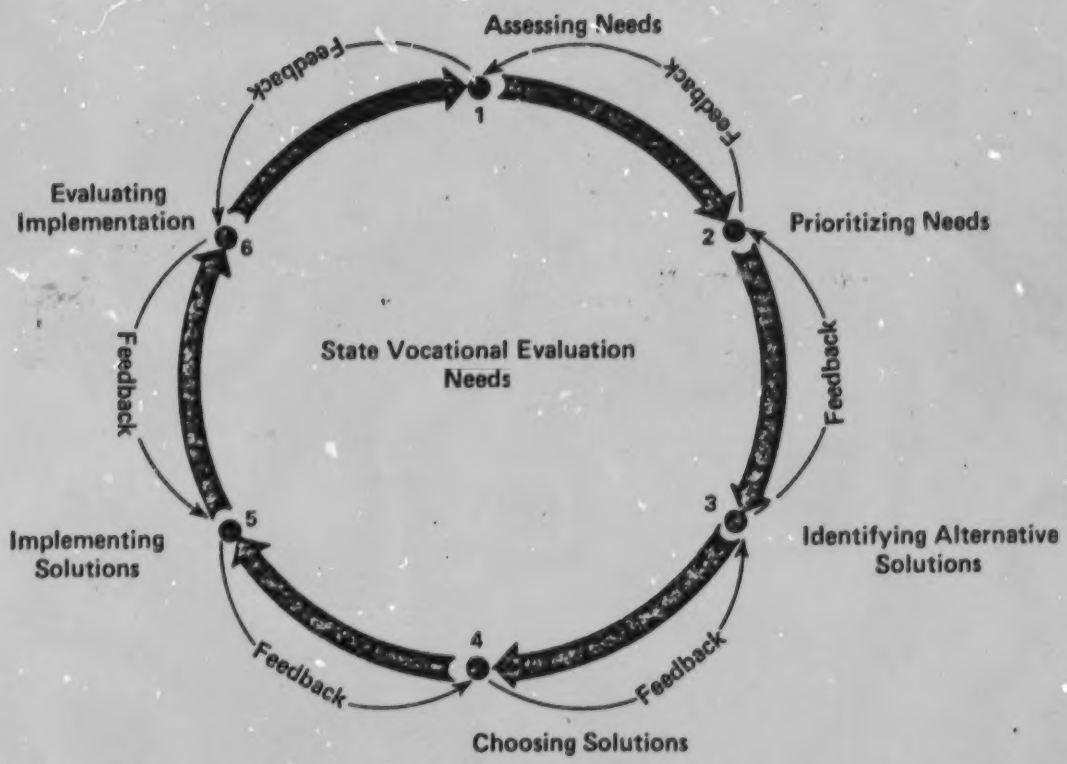

Figure 1. The process of providing technical assistance to states.

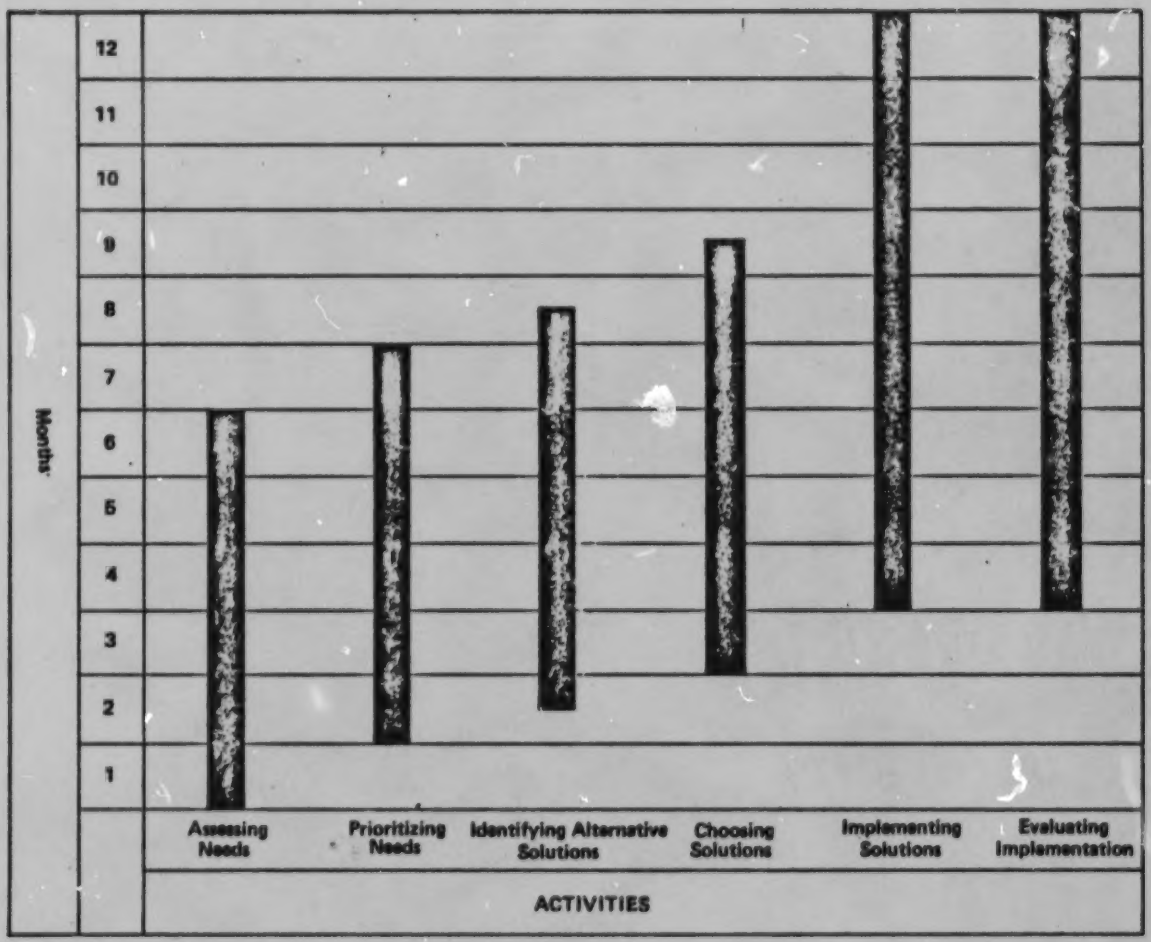

Figure 2. Gantt chart showing the schedule of activities.

not they wished to continue. Maine did not choose to participate in Year II of the project. Connecticut was selected as a replacement state based on the criteria used in Year I of the project. Since the emphasis was on the evaluation of programs and services for special needs populations, the question of a state's interest in this area was an additional consideration.

Memoranda of understandings between the participating states and the National Center were negotiated. These memoranda of understandings outlined the mutual responsibilities of the parties involved in the project.

Assessing Needs

An analysis was made of each evaluation system for special needs populations. This analysis consisted of an assessment of the state's ability to (1) determine accessibility of programs for special populations, (2) determine participation of special populations, (3) identify additional services for special populations, and (4) measure outcomes of programs and services for special populations. To accomplish the foregoing objectives, two basic procedures were employed: the interview and document analysis.

A structured interview schedule for key state personnel in vocational education department was developed from the items in the evaluation matrix showing causes and indicators of program effectiveness (see Figure 3). The interview schedule focused on four areas of concern: access, participation, process, and outcomes. The interviews were conducted in each state by the project director.

In addition to the interviews, the project staff asked for documentary evidence regarding the ability of the state vocational education system to evaluate programs and services for special populations. These were state enrollment reports, enrollment forms, evaluation instruments, follow-up reports, follow-up plans, follow-up forms, program evaluation reports, policy materials, and local program applications or plans. A document analysis was performed and used as a mechanism to crosscheck the information gathered from the interview schedule.

With the information gathered during the interviews and from the documents, each state was rated on its ability to evaluate programs and additional services for special populations by using an assessment instrument which was developed by the project staff and reviewed by the Evaluation and Policy Division. A report of each state was then made which described a state's strengths and weaknesses relative to its ability to evaluate programs and additional services for special populations. Before the report was finalized, a draft copy was made and sent to each state for reaction. In areas where there were disagreements on the ratings, additional evidence was requested before ratings were finalized. A final assessment report was then written and submitted to each state.

Prioritizing Needs

Each state was asked to respond to the assessment report. For this purpose, the project director called a conference consisting of key state vocational education administrators, evaluation specialists, and special education staff. The project consultant presented a brief summary of the findings. This was followed by open discussion. The process served to (1) enable the project consultant to clarify certain aspects of the report upon request of participants and (2) facilitate understanding and acceptance of the report.

When general agreement was reached concerning the key problem areas, the state vocational education evaluation personnel were asked to prioritize their evaluation needs giving consideration to fiscal and manpower resources. The project consultant and the state personnel then planned the specific technical assistance which would be provided by the National Center project staff. Further, timetables for the major problem areas were mutually agreed upon.

Identifying Alternative Solutions

The project consultant identified feasible alternative solutions to the key problem areas for each of the states. In the formulation of suggested alternative solutions, the following criteria were observed:

1. Solutions were within the manpower and fiscal resources of the state.

2. Solutions offered great potential value to the state and less potential damage.

3. Solutions required minimal investment of time and effort.

4. Solutions offered rewards in terms of some side payments extraneous to the original problem or condition.

The process of identifying alternative solutions involved face to face informal dialogues to a greater extent than formalized conferences. This procedure allowed the client and the project consultant to engage in an uninhibited discussion of issues involved. Furthermore, it enabled them to gain a better understanding of the other's ideas. In discussions, the project consultant strived to maintain objectivity and played a supportive role in helping the client make decisions.

Choosing Solutions

This step was an active process in which the clients made conscious choices about specific solutions to particular problems. This step involved the process of identifying definitive courses of action to take by state vocational education personnel and the process of legitimization. In both of these steps, the project consultant was either directly or indirectly involved.

When the state vocational education personnel had defined their positions on the priority issues, an implementation plan was developed. This included obtaining the approval, where necessary, of proper authorities such as the state director and/or the state board for vocational education. The State Advisory Council for Vocational Education was also informed of the project activities by the project consultant. In the legitimization process, the project consultant played a supportive role to the evaluation personnel.

Implementing Solutions

The major effort of the technical assistance staff was to help the states implement chosen alternative solutions. The process involved the delivery of sustained assistance through

on-site visitations, written communications, and telephone communications.

When assistance required a lengthy deliberation with a group of people, project consultants made site visitations. Project staff critiques and recommendations concerning plans and instruments were written and sent to the states. These were followed with site visitations whenever necessary. Most follow-up activities, however, were generally done by telephone.

Evaluating Implementation

Feedback and evaluation were a continuous process throughout the various phases of the technical assistance process. The states were encouraged to communicate freely and openly with the project director. Pertinent information with regard to the implementation process was regularly monitored and analyzed. At the end of the calendar year, a joint review of accomplishments by state vocational education evaluation officials and the project staff was conducted for each cooperating state. A profile of each state's accomplishment was made.

Notes

1. Section 104.402 Federal Register, Volume 42, No. 191 October 3, 1977, pages 53842-53843.

2. Ibid.

3. Bill Stevenson. "Technical Description: Providing Technical Evaluation Assistance to SEAs;" Unpublished mimeographed (Columbus, OH.: The National Center for Research in Vocational Education, no date), p. 1.

4. Ibid, p. 2.

5. Ibid.

6. Bill Stevenson et. al., Improving Education Evaluation: Case Studies of Four States (Columbus, Ohio.: The National Center for Research in Vocational Education, 1979).

7. Everett Rogers and Floyd Shoemaker Communications of Innovations: A Cross Cultural Approach (New York: The Free Press, 1971).

8. Ronald Havelock, The Change Agent's Guide to Innovation to Education. (Englewood Cliffs, N.J.: 1973).

CHAPTER II

A THEORETICAL FRAMEWORK: STRATEGIES FOR CHANGING VOCATIONAL EDUCATION EVALUATION SYSTEMS FROM TWO COMPETING PERSPECTIVES

In an effort to provide information necessary for the understanding of social change process, this chapter presents two major competing theories dealing with social change, namely the conflict theory and the consensus theory. The major assumptions, their derivation, and their strategies can be used to change vocational education evaluation systems in order to make them more effective in improving vocational education.

Consensus Perspective

The consensus perspective has its roots in the 19th century and, until recently, has been the dominant conceptual perspective in sociology. The organicism of Comte, Spencer, and Durkheim, the work of functional anthropologists like Malinowski and Radcliffe-Brown, and the work of Webster on social taxonomies helped shape the more modern consensus perspective.[1]

Censensus, social order, integration, social solidarity, equilibrium: these are the key words in the consensus perspective. Social systems are viewed as being composed of different interdependent elements which exist in equilibrium. To maintain this equilibrium, integration of personality systems into the cultural system must occur.[2] Parsons postulated two general mechanisms to perform this function: the mechanisms of socialization and social control.[3]

Fundamental, therefore, to the consensus perspective is the general notion of social equilibrium and the mechanism that integrates different levels of social reality to maintain a state of "homeostasis."[4] The major requisite is the integration among personal, cultural, and social systems. The major assumptions of the consensus perspective can be summarized as follows:

1. Social reality exists at different levels of organization--at a minimum level, the individual and cultural (social).

2. Basic needs for survival exist for individuals, and the creation of social organization (culture) represents a way of meeting these needs.

3. Once elaborated, patterns of social organization have their own needs which are meet by the further elaboration of social (cultural) patterns.

4. Hence, in order to understand why a particular social (cultural) pattern exists, it is necessary to know the level or type of need or requisite that it meets.[5]

Strategies for Change

The consensus strategies are most widely known. The strategies employed in such government programs as the extension service, community development programs, adult education, and technical assistance are all based on the consensus perspective. The major assumptions of the consensus strategies for change are as follows:

1. The central problem in planned change is increasing productivity and/or efficiency.

2. Change largely occurs through the spread of technical knowledge and superior information from the advanced to the less advanced areas.

3. The less advanced areas (or backward sector) serve as a brake on the advanced areas, and thus, limit progress and development.

4. The major characteristics of the backward sector which inhibit overall progress and development are lack of knowledge, poor attitudes, and lack of resources.[6]

The major strategy, therefore, for effecting change (from the consensus perspective) is best typified by Rogers' classic strategy for diffusions of innovations.[7] This section details some applications of his principles to vocational education. His principles are outlined briefly as follows:

1. Provide technical assistance by change agents.

To be most effective, change agents need to be credible. Persons in charge of the state evaluation units are the most likely persons to assume these positions of leadership for changing evaluation. Their educational background, experience, and knowledge of unique educational problems within their own states help establish credibility. Their knowledge of who will be of assistance to them in evaluation efforts at the local level will help assure working with individuals who are most like themselves.

Change agents have the responsiblity to know the law pertaining to evaluation requirements and the essential characteristics of an effective evaluation system. Knowledge of these requirements and characteristics will assist change agents in providing technical assistance. However, a thorough understanding of the change process from the consensus perspective is also necessary.

2. Establish rapport with and receive a commitment from clients.

In working with educational agencies, rapport must be established with the individuals with whom the change agents will be working. Rapport is based upon individual personality, credibility, and congeniality, and it results in the establishment of trust between the change agent and the client.

It is best that a written agreement between change agents and clients be executed which should specify the expectations of the clients and the change agents. The change agents must be able to obtain information about the clients' work environment and the way in which evaluation functions in relation to other agency activities. At the same time the clients become aware of what the change agent will do for them.

3. Perform a needs assessment based on what clients are required to do and what they are able to do.

Change agents in this instance are actually performing an evaluative function. They are looking at an agency's capability to secure information required by law and the additional information required if clients wish to encompass those elements essential to an effective evaluation system.

Such administrative concerns relating to intra and inter agency cooperation and use of evaluation reporting must be addressed by the change agent. Credibility of the change agent plays an important role in this endeavor. Successful evaluation is the key to this facet of credibility.

4. Prioritize the evaluation needs of the agency in cooperation with clients.

By means of an assessment of evaluation capabilities, change agents are in a position to advise clients. As clients recognize deficiencies in their capabilities to perform specified evaulation activities, they can make decisions to give priority to certain activities. Priorities are based on requirements of mandated legislation, staff availability, and ability as well as funding. Once limitations are established, a cooperative effort between change agent and client can begin so evaluation activities can be accomplished.

5. Clients in cooperation with change agents need to identify alternative solutions to evaluation problems.

Evaluation capabilities tend to vary from state to state as well as among local education agencies. The change agent can assist clients by helping them think through alternative solutions to evaluation problems brought to the forefront by legislative mandate and the essential characteristics of an effective evaluation system. The pros and cons of each possible alternative solution must be considered before a choice of solutions to problems is made.

6. Choice of solutions to evaluation problems is the responsibility of the client.

There are no evaluation manuals which can dictate a method of evaluation. Manuals devoted to this subject may present alternatives, but a choice of solution to any evaluation problem rests with the client. This is because the responsibility for evaluation is the client's--not the change agent's.

7. Clients need to implement changes in the evaluation process.

Implementing changes in the evaluation process chosen is the next step. This is the test of the chosen solution. Implementation will either insure the capability of clients to evaluate or will demonstrate that clients' method is inadequate or inefficient.

8. Evaluate the implementation of specified evaluation procedures.

Change agents can be more objective than the clients who have implemented the evaluation process. In any case it is wise to document the amount and type of effort, if any, a client has made in an area to be evaluated before the new implementation begins. If this procedure is followed, it is possible to tell the extent to which improvements have been made.

9. Master the arts of the different techniques for implementing innovations.

Hull and McCaslin presented 28 techniques.[8] These are as follows:

Informative

1. Printed Information
2. Audiovisual Material
3. Mass Media
4. Lecture
5. Symposium
6. Demonstration
7. Survey Feedback
8. Discussion
9. Brainstorming
10. Consultation

Persuasive

11. Personal Interview
12. Role Playing
13. Cooperation
14. Staff Development
15. Differentiated Staffing
16. Involvement in Product Development
17. Small-Scale Use of the Innovation
18. Competition
19. Promotion of the Product
20. Endorsement by Authorities
21. Recognition of Trial Users
22. Financial Incentive
23. Overstatement

Directive

24. Deadlines
25. Legal Mandates
26. Fait Accompli
27. Strategic Replacement of Staff
28. Threats of Punishment

The Conflict Perspective

The consensus approach to social change has been criticized as merely descriptive. It does not give a satisfactory account of the sources or dynamics of social change. Further, the theory does not provide a good basis for the analysis of history, particularly that dealing with nonorderly change.

Consensus theorists view tension and strain as dysfunctional--connoting some form of sickness in the system, therefore, disruptive.[9] This has been criticized by conflict theorists because it disregards conflict's positive factors. It centers its attention upon problems of adjustment rather than upon conflict, upon social statics rather than upon social dynamics.[10]

Conflict is defined as "any social situation or process in which two or more entities are linked by at least one form of antagonistic psychological relation or at least one form antogonistic interaction."[11] Antagonism involves such states as "incompatable goals, mutually exclusive interests, emotional hostility, dissensus, violent struggle, regulated mutual interference, and the like."[12]

The conflict perspective, contrary to some views, is as old as functionalism. It found its inspiration in the works of two German sociologists, Karl Marx and Georg Simmel.[13] Recent conflict theorists like Ralf Dahrendorf and Lewis Coser have contributed to the refinement of the theory. Conflict theorists take the folllowing assumptions regarding conflict and the nature of social change:

1. While social relationships display systematic features, these relationships are rife with conflicting interests.

2. This fact reveals that social systems systematically generate conflict.

3. Conflict is therefore an inevitable and pervasive feature of social systems.

4. Such conflict tends to be manifested in the bipolar opposition of interests.

5. Conflict most frequently occurs over the distribution of scare resources, most notably power.

6. Conflict is the major source of change in social systems.[14]

The basic proposition is that conflict often performs basic preserving functions. It is not always causes dysfunction. It is often necessary for the peaceable maintenance of relationships, and it is a major precursor of social change. Lewis Coser summarizes the six important functions of conflict:

1. Conflict permits internal dissention and dissatisfaction to rise to the surface and enables a group to restructure itself or deal with dissatisfaction.

2. Conflict provides the emergence of new forms of appropriate behavior by surfacing shortcomings.

3. Conflict provides means of ascertaining the strength of current power structures.

4. Conflict works to strengthen the boundaries between groups, bringing out their distinctiveness.

5. Conflict creates bond between loosely structured groups, unifying dissent and unrelated elements.

6. Conflict works as a stimulus to reduce stagnation. Conflict may alter society.[15]

Strategies for Change

The use of conflict as a strategy for change is a fairly new phenomenon among educators although it has had a long history in the armed forces and labor unions. The middle class orientation of educators has led them to embrace "an anti-conflict, anti-violence orientation. . .[and] this has resulted in rule by consensus and conflict avoidance."[16] Conflict is rejected because it is felt that reaching decisions through consensus and cooperation is the best method to achieve social change.[17]

Recent events, however, have shown that educators and other "peace loving" citizens are willing to use conflict as a strategy for change after consensus strategy fails. This has become socially acceptable. The numerous teacher's strikes and sit-ins and the protest marches and demonstrations employed by such groups as the pro-ERA, anti-nuclear, pro- or anti-abortion attest to this fact. A number of ground-breaking laws have been passed through the use of conflict strategy.

In many instances those individuals who resist change the most vigorously will, when convinced of the benefits of a proposed change, become its most enthusiastic proponents. The technical assistance project reported in this publication shows that in some cases those state people who were most questioning of the team's conclusions and recommendations eventually supported and implemented those recommendations most effectively. One way of finding the most effective solution to a problem is to create a situation where individuals are caused to take both positive and negative positions on an alternative solution, and defend those positions vigorously. In such a situation attitudes and positions can be changed. Conflict can be used in a positive way to gain support for needed changes.

The use of conflict situations may also be fraught with danger for the user. If members of the establishment are challenged they may feel threatened to the extent that they seek reprisals against those taking an opposing view even though that view may be perfectly justified and reasonable in the eyes of the opposition. Also in some instances, it may be impossible to control the direction and the extent of a protest once it has started.

President Kennedy is quoted as saying, "The society which does not allow peaceful dissent is assuring itself of violent dissent." Until recently this country and its institutions have operated almost exclusively on a consensus approach to problem solution. New tensions and new opportunities are created as leaders learn to cope with and use conflict as a method to achieve change. This section, therefore, details some conflict strategies for change in vocational education.

1. Identify areas of conflict and use them as focal points for promoting needed change.

Serious questions are being asked about the outcomes of vocational education. A segment of the vocational education community believes strongly that the traditional outcome of job

placement should continue as the sole criteria for program success. Others insist that many other outcomes in addition to placement are important and should be considered in determining program effectiveness. A positive change which could result from this conflict, if properly channeled, could be an increased consciousness and concern for product evaluation in vocational education.

The recent differences of opinion as to the proper role of vocational education in social change can be used to achieve some positive ends. If minorities and women who now are calling for greater equity in all of education can be convinced of the contribution vocational education can make to these groups they can help to initiate needed changes. At the same time, this "over the shoulder look" vocational education is receiving can create increased opportunities for all students needing occupational training.

2. Organize groups to "establish a creative tension" within the organization.

In many organizations the research unit is looked at as the "burr under the saddle" by the more traditional segments. The research unit, if properly constituted and supported, can be a strong factor for change through its questioning of every procedure employed. The more traditional branches can play an equally valuable role by challenging and requiring proof of worth of each new idea presented by research. The wise administrator learns to balance these two conflicting views and take the best of both.

Many vocational programs have found strong advocacy in the form of an agressive advisory committee. Employers in the community who know the benefits and needs of vocational education can speak with a strong voice to an administration that fails to support programs needed by the community.

3. Increase the involvement of the different sections of community (parents, special needs, skilledworkers, etc.) in the process of evaluation.

These individuals, because of their different background, and different perceived needs, will view programs in a different light and ask different sets of questions. This will inevitability create tension and possible conflict. If in the process it causes vocational education to take a new look at

itself, some very positive changes can result. Programs and teachers can become more open and accepting, students can learn to work with those different from themselves, and a greater need can be served.

4. Broaden the representation on evaluation teams.

The number of people who can be fully involved in the process of evaluation (strategy 3) is limited. A much larger number of people can be included on evaluation teams. The benefits will generally be the same, possibly in a lesser degree, but certainly more widespread. The support of more people who better understand the benefits and needs of vocational education through this participation can also be helpful in stimulating change and improvement.

5. Establish solid alliances with powerful community groups such as Parent Teachers Associations and labor units.

These community groups can be either strong supporters of vocational education or its greatest detractors. Usually this depends upon the degree of their knowledge and involvement with vocational education. Soliciting support implies a responsiveness to needs. These groups will make demands, identify problems, and probe for evidence of effectiveness or the lack of its. They may create tensions by their demands, but improvement can occur through this change.

6. Learn the art of protest, boycotts, and strikes, and employ these when appropriate.

Most of us cringe at the thought of using these tactics to bring about changes. However, there are numerous instances where this tactic seems the only way to achieve desirable ends. The gains of labor, the civil rights movement, and even now the human rights struggle around the world all have used these measures to bring about change. In many instances we can act outselves into a new way of thinking more effectively than we can think ourselves into a new way of acting. Sometimes conflicting action is necessary for change to occur in ourselves or in our institutions.

Notes

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12 Ibid.

13. Ibid., p. 122.

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CHAPTER III

A MODEL FOR EFFECTIVE EVALUATION OF PROGRAMS FOR SERVICES FOR SPECIAL POPULATIONS

During the past few years, a number of federally mandated requirements have placed additional requirements on state evaluation systems. However, some of the data/information required for compliance purposes are also needed for planning and program improvement. In view of these requirements, state evaluation personnel have expressed a need for a method of assessing the adequacy of state evaluation systems in both mandated and planning requirements especially in the evaluation of programs and services for special populations.

The activity designed to meet this need was started in the first year of this project by making a tentative list of essential elements of an effective evaluation system. During the first quarter of the second year of the project, work was begun to identify the elements of an effective evaluation system that would focus on vocational education programs for special populations. The project director developed a matrix for those identified elements. A review of literature focusing on federal legislation led to the identification of additional elements and factors to be included in the matrix (see Appendix B.) This matrix was then critiqued by selected state vocational education evaluation personnel and by the evaluation technical advisory panel and professional staff of the Evaluation and Policy Division of the National Center for Research in Vocational Education. Comments and suggestions were noted and incorporated into the present matrix.

The matrix, however, does not show causal relationships. Therefore, a causal model was developed to clarify the relationships of the major variables in the matrix. One of the objectives of the project staff was to give people in vocational education evaluation further insights into the complex process of evaluating programs and services for special populations.

From the matrix, a self-assessment instrument was developed to help the states assess the adequacy of their evaluation systems to evaluate programs and services for special

populations. A discussion of the development of the instrument is presented in the latter part of this chapter.

A Matrix for the Evaluation of Vocational Programs for Special Populations

Clarification of the role and responsibility of evaluation and more definitive statements of the concepts upon which evaluation is built are required in order to determine the effectiveness of a state's evaluation system for special populations and in order to make needed improvement. One of the first steps is to "sort" those factors which show effectiveness and those factors which are believed to cause it. Unless this "sorting" is done as illustrated in the attached matrix, the resultant mixing of cause and show factors can confuse both determination of quality and identification of needed changes. The data and information expressed in the matrix demonstrate the factors which must be determined in order to evaluate and recommend improvement in programs and services for special populations.

Figure 1 shows that the matrix is divided into four quadrants--ACCESS, PARTICIPATION, PROCESS, AND OUTCOMES. The items on the right are indicators which show effectiveness and may be the basis for an evaluation. The items on the left are elements within the vocational education system which should be considered for change in order to effect improvement.

Special elements within each of the major categories of the matrix are shown in the succeeding pages.

Cause	Effectiveness	Show

ACCESS

1.0 Facility Factors
- 1.1 Architecture and Equipment
- 1.2 Site Location (non-discriminatory)
- 1.3 Site Selection (non-discriminatory)
- 1.4 Modification of Physical Plant
- 1.5 Comparable Facilities
- 1.6 Housing Opportunities
- 1.7 Topographical Factors

2.0 Educational Factors
- 2.1 Recruitment
- 2.2 Admission Criteria
- 2.3 Program Offerings
- 2.4 Attitudinal Barriers

3.0 Societal Factors
- 3.1 Attitudinal Barriers
- 3.2 Behavioral Barriers
- 3.3 Economic Barriers

PARTICIPATION

1.0 Enrollments
- 1.1 Disadvantaged
- 1.2 Handicapped
- 1.3 Minorities
- 1.4 Limited English-Speaking
- 1.5 Sex Designation
- 1.6 Age (elderly)
- 1.7 Instructional Setting

PROCESS

1.0 "Additional Services"
- 1.1 Administration Related
- 1.2 Guidance and Counseling Related
- 1.3 Instruction Related
- 1.4 Placement Related

OUTCOMES

1.0 Student Achievement
- 1.1 Skills
- 1.2 Acquisitions in the Affective Domain

2.0 Successful Program Completion
- 2.1 Grades 11 and 12
- 2.2 Postsecondary
- 2.3 Adult
- 2.4 Apprenticeship

3.0 Successful Placement
- 3.1 Employed
- 3.2 Unemployed
- 3.3 Pursuing Additional Education
- 3.4 Status Unknown

4.0 Successful Employment Over Time
- 4.1 Duration
- 4.2 Promotions
- 4.3 Salary Increases
- 4.4 Reaction to Training

Figure 3. Matrix for the evaluation of programs and services for special populations.

ACCESS

1.0 Facility Factors

* 1.1 Architectural and equipment
* 1.2 Site location (non-discriminatory)
* 1.3 Site selection (non-discriminatory)
* 1.4 Modification of physical plant
* 1.5 Comparable facilities
* 1.6 Housing opportunities
* 1.7 Topographical

2.0 Educational Factors

2.1 Recruitment

* 2.1.1 Public notification
* 2.1.2 Promotional efforts
2.1.3 Identification of potential students in school system
2.1.4 Identification of potential students outside of the school system
2.1.5 Parent motivation

2.2 Admission Criteria (Discriminatory practices to avoid)

* 2.2.1 Eligibility based on residence
* 2.2.2 Eligibility based on numerical limits
* 2.2.3 Eligibility based on student option (race, national origin and sex designation)
* 2.2.4 Eligibility based on applicant evaluation
* 2.2.5 Eligibility based on language
* 2.2.6 Access based on employment opportunities (handicapped)
* 2.2.7 Eligibility based on age

2.3 Program Offerings

2.3.1 Adequacy of educational opportunities
2.3.2 Diversity of program offerings
2.3.3 Trained staff
2.3.4 Modified course presentation (handicapped)
2.3.5 Support services
* a. day care
b. auxiliary aids
c. remedial
* d. financial
2.3.6 Program comprehensiveness
- job, social and employability skills

* Note. Required by federal legislation.

2.4 Attitudinal Barriers

2.4.1 Stereotyping of person's ability to do work
2.4.2 Stereotyping in career categories
2.4.3 Prejudice about student's ability to learn
2.4.4 Individual staff prejudice concerning certain groups of people
2.4.5 Student self-concepts

3.0 Societal Factors

3.1 Attitudinal Barriers

3.1.1 Stereotyping person's ability to do work
3.1.2 Personal negative self-image
3.1.3 Job stereotyping
3.1.4 Non-accepting attitudes in society

3.2 Behaviorial Barriers

3.2.1 Job modification
3.2.2 Job sharing
3.2.3 Ability to secure satisfactory employment
3.2.4 Role model representation
3.2.5 Policy statements
3.2.6 Hiring practices

3.3 Economical Barriers

3.3.1 Assure availability of suitable employment
3.3.2 Inform completers about available employment

PARTICIPATION

1.0 Enrollments

** 1.1 Disadvantaged
- 1.1.1 Economically
- 1.1.2 Academically

** 1.2 Handicapped
- 1.2.1 Mentally retarded
- 1.2.2 Hard of hearing
- 1.2.3 Deaf
- 1.2.4 Speech impaired
- 1.2.5 Visually handicapped
- 1.2.6 Emotionally disturbed
- 1.2.7 Orthopedically impaired
- 1.2.8 Other health impaired
- 1.2.9 Specific learning disabled

** 1.3 Minorities
- 1.3.1 American Indian/Alaskan Native
- 1.3.2 Asian American/Pacific Islander
- 1.3.3 Black, not Hispanic
- 1.3.4 Hispanic
- 1.3.5 White, not Hispanic

** 1.4 Limited English Proficiency
- 1.4.1 Spanish dialect
- 1.4.2 Italian dialect
- 1.4.3 Other

** 1.5 Sex Designation
- 1.5.1 Female
- 1.5.2 Male

1.6 Age (Elderly)

** 1.7 Instructional Setting (handicapped)
- 1.7.1 Regular class
- 1.7.2 Mixed class
- 1.7.3 Separate class
- 1.7.4 Separate facility
- 1.7.5 Other

Note. ** Required by VEDS, due December 1, 1980

PROCESS

1.0 "Additional Services"

1.1 Administration Related (SEA and LEA Policy Statements)

1.1.1 Program
- a. diversity
- b. duration (flexibility)
- c. class size
- d. staff/student ratios
- e. migrant reciprocity

1.1.2 Job Placement

1.1.3 SEA and LEA/Employer Relationships

1.1.4 Staff
- *** a. patterns (racial/ethnic and female)
- b. up-grading
- c. role models

1.1.5 Interagency Agreements
- a. vocational education/special education
- b. vocational education/CETA
- c. vocational education/vocational rehabilitation

1.1.6 Advisory Committee Utilization
- a. state
- b. local
- c. craft

* 1.2 Guidance and Counseling Related

1.2.1 Student testing and assessment
1.2.2 Career information
1.2.3 Comprehensive career counseling
* 1.2.4 Non-discriminatory counseling materials and activities
* 1.2.5 Interpreters for LESA and hearing impaired students

Note. * Required by federal legislation.
*** Required by VEDS, due December 1, 1981.

1.3 Instruction Related

- 1.3.1 Facility and equipment availability
- * 1.3.2 Facility and equipment modification
- * 1.3.3 Bias free materials (all special populations)
- 1.3.4 Individual (tutor) instructor
- 1.3.5 Individualized instruction
- 1.3.6 Individual education program (IEP), (handicapped)
- 1.3.7 Individual work program (IWP), (handicapped)
- 1.3.8 Instruction toward
  - a. independent living
  - b. personal care
  - c. work adjustment
  - d. social skills
- 1.3.9 Recreational and social activities
- 1.3.10 Non-bias, non-stereotyping and non-discrimination
  - a. among staff
  - b. among non-special population enrollees
- * 1.3.11 Cooperative evaluation/work study
- * 1.3.12 Apprentice training

1.4 Placement Related

- 1.4.1 Employer consultations
- 1.4.2 Job matching (handicapped)
- 1.4.3 Job restructing (handicapped)
- 1.4.4 Job follow-through
- 1.4.5 Recommendations for enrollees lacking or having poor work histories
- * 1.4.6 Employer or prospective employer discrimination
  - * a. recruitment
  - * b. hiring
  - * c. placement
  - * d. assignment to work task
  - * e. hours of employment
  - * f. levels of responsibility
  - * g. pay

Note. * Required by federal legislation.

OUTCOMES

1.0 Student Achievement

* 1.1 Knowledge and Skills for Successful Employment
- 1.1.1 basic educational
- 1.1.2 technical
- 1.1.3 employability
- 1.1.4 work adjustment
- 1.1.5 personal
- 1.1.6 social
- 1.1.7 independent living

1.2 Acquisitions in The Affective Domain
(i.e., interests, attitudes, appreciations, values, and emotional sets or biases.)

2.0 Successful Program Completion

2.1 Grades 11 and 12
- 2.1.1 limited competency acquisition to meet individual needs
- 2.1.2 program competency acquisition

2.2 Postsecondary
- 2.2.1 limited competency acquisition to meet individual needs
- 2.2.2 program competency acquisition

2.3 Adult

2.4 Apprenticeship

3.0 Student Placement (completers/leavers-racial/ethnic/sex designation/disadvantaged/limited English and handicapped)

*** 3.1 Employed (rate)
- *** 3.1.1 in field related to training
  - a. civilian
  - b. military
- *** 3.1.2 in field not related to training
  - a. civilian
  - b. military
- *** 3.1.3 salary rates
- *** 3.1.4 employer satisfaction
- *** 3.1.5 other

Note. * Required by federal legislation.
*** Required by VEDS, due December 1, 1981.

*** 3.2 Unemployed (rate)
  *** 3.2.1 seeking employment and not pursuing additional education
  *** 3.2.2 not in labor force and not pursuing additional education

*** 3.3 Pursuing Additional Education

*** 3.4 Status Unknown

4.0 Successful Employment Over Time
  4.1 Duration
  4.2 Promotions
  4.3 Salary Increases
  4.4 Reactions to Training

Note. * Required by federal legislation.
  *** Required by VEDS, due December 1, 1981.

A Causal Model Showing the Relationships of Access, Participation, Process, and Outcomes

As shown in the matrix (Figure 3), participation is a major indicator of access while outcomes are major indicators of process. This does not mean, however, that participation is a sole function of access factors and outcomes are sole functions of process. The model (see Figure 4) illustrates the causal relationships of access factors, participation, process, and outcomes.

Vocational education takes place in a relative task environment. Several factors in the environment influence the delivery of vocational education. Figure 4 illustrates the cyclic and sequential relationship of variables as they contribute to the delivery of vocational education in the task environment. Endogenous factors in the model are variables that are found in the relevant task environment while exogenous factors are variables, such as certain pressure groups, which emanate from outside the task environment.

It is interesting to note that within the task environment all the major variables under consideration have at least one arrow from another variable directed to them. This illustrates the complex nature of the relationships that exist among the variables and the compounding effects of one variable on other variables. Other unaccounted for intervening variables (represented by straight arrows) affect the variables under consideration.

In Figure 4, vocational education delivery can be viewed as a process that can result in both short term outcomes and long term outcomes. A key to the delivery of vocational education is the process component which deals with manipulation of the environment and its contributing factors and elements.

Access

Access refers to those factors which directly influence the number and kinds of special population enrollment: facility factors, educational factors, and societal factors. Figure 4 shows that access factors are also influenced by the results of student's outcomes. For example, some modifications in the admission criteria may occur as a result of students' outcomes.

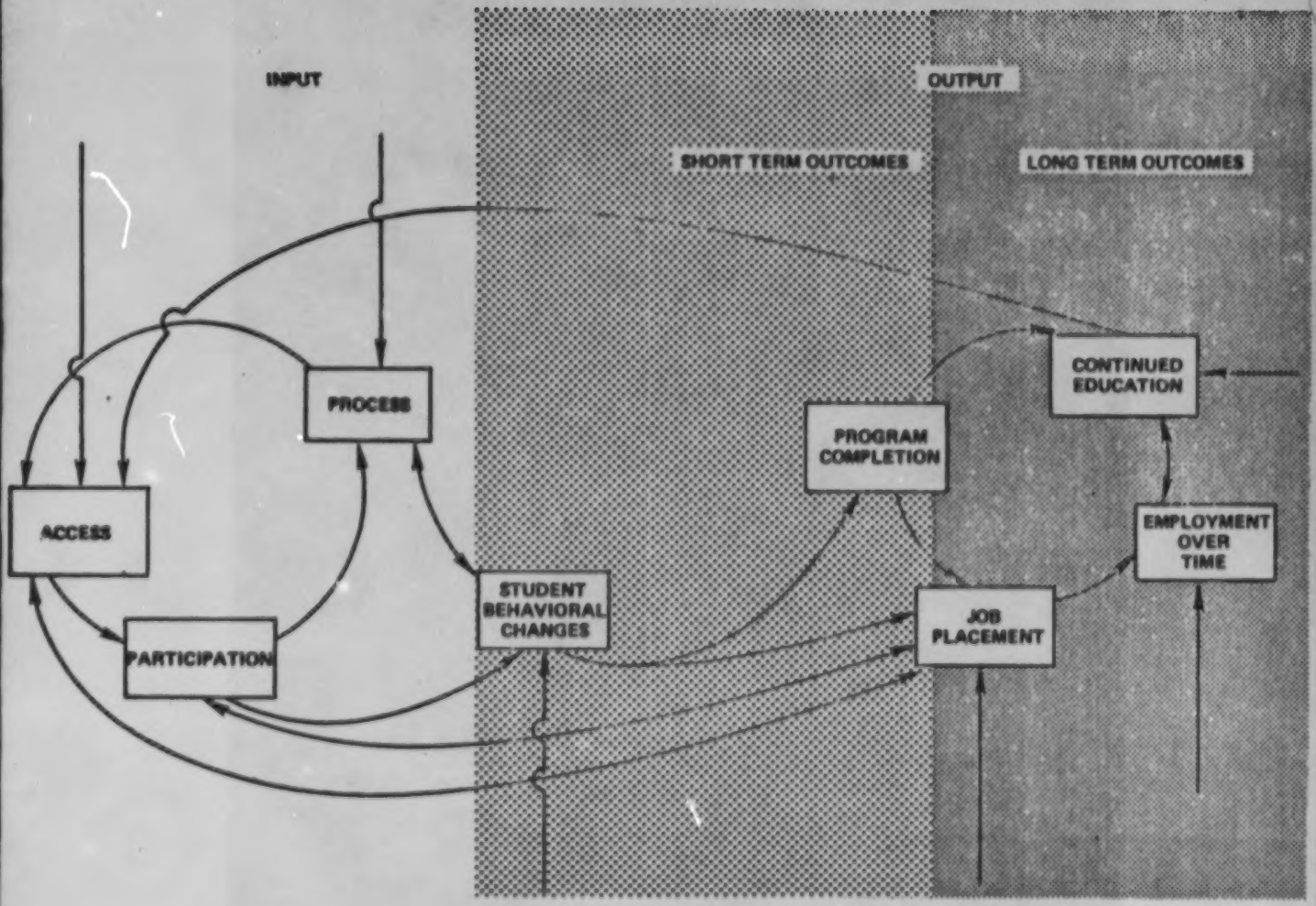

Figure 4. A causal diagram showing the relationships of access, participation, process, and outcomes.

Facility factors. These factors have application chiefly for the physically handicapped. As shown in the outline on access, all of the mandated subfactors must be evaluated to see that they conform to federal specifications. Without these special considerations the physically handicapped would not be able to participate in vocational education programs and would be deprived of habilitative education.

Educational factors. The Access outline show that there are four subfactors to be considered in the evaluation of programs for special populations: recruitment, admission criteria, program offerings, and attitudinal barriers. Under recruitment, both public notification and promotional efforts are required by law to be nondiscriminatory. In addition, admission criteria must be nondiscriminatory.

Support services can provide access to those who might not otherwise find it possible to attend vocational education programs. Federally funded agencies are required to determine whether existing services (e.g., day care, financial assistance) are provided in a nondiscriminatory manner.

Vocational education has the responsibilty to make program offerings as diverse and comprehensive as possible so that participants can follow their talents and motivations into fields of personal interest. In addition to teaching job skills, programs need to teach students employablity skills (how to get a job) and the social skills they need to cope with the job situation.

Attitudinal barriers are possibly the greatest deterrent to entry into occupational education and subsequent employment. Preconceived ideas about ability to perform may lead to placing special population individuals into training for only lesser job tasks. If negative self-concepts are held by students, motivation to learn may be lacking, and little learning may takes place.

Societal factors. Schools can have a part in influencing people in society to develop accepting attitudes and behaviors. Behaviors in society influence a person's occupational choice. Some examples of behavioral barriers which may prevent special populations from enrolling in vocational programs are (1) when job modification and job sharing are not made available to the handicapped, (2) when only the lowest skilled and lowest paying

jobs are made available to minority individuals and women, and (3) when hiring practices and/or policy statements discriminate against any of the special population groups.

Participation

Participation refers to the number and kinds of special populations enrolled in vocational programs. As seen in Figure 4, this is principally influenced by two factors--access and student outcomes. The type of facility directly influences the type and kind of special population enrollment. Further, the success of special populations, both in school and in job situations also has an influence on whether or not these individuals attempt to enroll in vocational programs.

Information about participation is obtained by collecting accurate enrollment data by subgroups in USOE two-digit and six-digit code designations for each of the vocational education service areas and specific vocational education programs. Reference to the Participation outline reveals that data on those special population groups which are preceded by two asterisks are required to be collected by states during Year I (1979-1980) of the Vocational Education Data System (VEDS) while those groups preceded by three asterisks are required by VEDS reporting system for Year II (1980-81). Designation as to instructional setting for the handicapped is required by VEDS effective Year II.

Process

Process refers to the educational environment which is manipulated or modified in some way so that learning can take place. Vocational education students in general are taught in a modified environment and learn occupations as a result. But when special populations are subjected to vocational education, special process considerations need to be provided. These special process considerations are termed "additional services" as found in the Education Amendments of 1976. Additional services that are needed by any one individual student in a vocational education program will vary greatly because of the diversity and unique needs found among special population groups.

Additional services have been divided into four factors: administrative related, guidance and counseling related, instruction related, and placement related. Figure 4 shows that process is influenced by two important factors--numbers and kinds of special population enrollments (participation) and student behavioral changes.

Administrative related. One of the factors included in process is administration. Administration is heavily influenced by forces from both inside and outside the task environment. Administrative program policy at the state and local levels must afford special populations the opportunity to succeed in learning an occupation. A diversity of programs may need to be made available, time to complete a program may need to be altered, class size may need to be changed to allow for individualized or small group instruction (which would decrease the teacher/student ratio), and reciprocity of credits earned in one vocational education environment may need to be accepted by the institution receiving a transfer student. At the same time administration needs to be concerned about appropriate nondiscriminatory job placement for special population students.

Administrative staff also need to reflect representation of women and persons representing differing ethnic groups. The VEDS reporting system requires staffing pattern data for Year II. At the same time, employment in administrative positions must allow for advancement or up-grading and present positive role models to those who may otherwise be too discouraged to seek administrative positions in vocational education.

Guidance and counseling related. Evaluation must examine the materials used and the activities performed by counselors to assure that neither materials nor activities are discriminatory. Evaluators also need to ensure that interpreters are provided for language- and hearing-impaired students. The Education Amendments of 1976, in general, specify that guidance and counseling may include evaluation of the kinds and frequency of student testing and assessment, the amount of diversity of career information, and the comprehensiveness of the counseling.

Instruction related. As seen under Access, facility or equipment should not constitute barriers to vocational education programs for special populations. Therefore, for

certain learners, facility and equipment modifications may need to be made especially in cases where learners are handicapped. In addition, instructional materials used must be free from bias if published after the civil rights legislation of 1972.

Cooperative education, work-study, and apprentice training are additional means for learning an occupation. If any of these programs are available in a school system, provisions must be made to prevent discrimination against special populations who may wish to participate.

At times, there may be a general need to provide tutorial or individualized instruction to special population groups. This kind of instruction may be generally required in the case of handicapped students who have mental or emotional disabilities. P.L. 94-142 requires that all handicapped secondary vocational education students have an Individualized Education Program (IEP) which should coincide with an Individual Work Program (IWP).

Special educators have the responsibilty of teaching basic skills to disabled students to enable them to become independent in their living. They must function within a community with as little assistance as possible. Handicapped students need to be taught personal care and social skills. All of these need to be reinforced within the occupational training program provided by vocational education, especially for those handicapped who are mentally disabled in some capacity. Recreational and social activities within the institutional environment are as important to special populations as they are to regular students. Evaluators need to check to see that discrimination does not occur and that these activities include, to the extent possible, all students.

Placement related. Another area to which evaluators should pay particular attention is employer or prospective employer discrimination in recruitment, hiring, placement, assignment to work tasks, hours of employment, levels of responsibility, and pay. Evaluation of practices in these areas is mandatory. Other elements evaluators may choose to examine are job matching and restructuring especially for the handicapped. Job follow-through for all special population groups is important.

Outcomes

Planned or expected outcomes of vocational education programs include student achievement (student behavioral changes), successful employment completion, student placement, and successful employment over a period of time. The latter is not a legislated requirement, but it is of important in evaluation. The model (Figure 4) shows that student outcomes are influenced by process, participation, and access as well as outside factors.

Student achievement. In a vocational education program one of the outcomes is the acquisition of knowledge (a cognitive function) and occupational skills (which include cognitive, psychomotor, and affective functionings). It is expected that students will achieve in basic educational knowledge, technical knowledge, occupational skills, employability skills (how to get a job), and skills required to hold a job (included as part of work adjustment). Requisites for community living dictate that individuals acquire independent living skills and be mobile and functional in the community. In addition, they need to develop personal and social skills that make them acceptable in the community, particularly in their work setting. Interests, attitudes, and values are elements of the affective domain that are influenced by vocational programs.

Successful program completion. While successful program completion is perhaps the goal which most vocational educators hope to achieve for their students, this does not always occur. One student may meet all the demands of program competency acquisition while another student may only acquire limited competency which however, satisfies the individual needs of that student. It seems important to know, for example, that a mentally handicapped student has achieved "X" number of competencies even though that student may not be able to achieve the entire list of competencies required for completion of an entire program. Under the Rules and Regulations for Section 504 of the Rehabilitation Act of 1973, (Section 84.4 (b) (2)) the law requires the following:

> For purposes of this part, aids, benefits, and services, to be equally effective, are not required to prodice the identical results or level of achievement for handicapped and non-handicapped persons, but must afford handicapped persons equal opportunity to obtain the same results, to gain the same benefit, or to reach the same level of achievement, in the most integrated setting appropriate to the person's needs.

Student placement. Youth unemployment is a major concern to the Congress of the United States. Unemployment levels of young adults, especially young adults belonging to minority groups, have increased over the last decade. Vocational education is being held accountable for placement of its students in a stricter sense than has been the case in the past. As can be seen by referring to the matrix outline on Outcomes, the VEDS reporting system for Year II is requiring placement information on completers and leavers of vocational education programs whether they are regular students or students from special population groups. Placement for some special population individuals may be something other than job placement. For some handicapped individuals, for instance, such things as sheltered workshops or additional training may be more acceptable.

Successful employment over a period of time. The rates of vocational program completers and leavers who are successfully employed over a period of time should provide vocational education important information by which to determine the effectiveness of programs. Also important is the information concerning the factors which contribute to successful long-term employment. Such information will be of great value in determining the kinds of program improvement needed to increase program effectiveness.

The Self-Assessment Instrument

The self-assessment instrument was designed to help states assess the adequacy of their vocational education systems to evaluate programs and services for special populations, especially meeting both legislative and planning requirements. The development of the instrument involved the following steps:

1. An initial instrument was derived by the project staff from the elements of the evaluation matrix. This was circulated among the staff of the Evaluation and Policy Division. A meeting was held at which suggestions and criticisms were given and noted.

2. The instrument was reviewed and tested by the four cooperating states in rating the states' respective abilities to evaluate programs and services for special populations enrolled in vocational education. States' reactions with regard to the validity of the criteria and measurement indicators being used were noted.

3. A revised instrument was then constructed. This was sent to selected staff members of the National Center and state vocational departments for review. Suggestions and criticisms were noted.

4. A final instrument which states may use to rate their abilities to evaluate programs and services for special populations in vocational education was then constructed (see Appendix A).

Ranking of Level of Difficulty of Problems in Evaluating Programs and Services for Special Populations

Level of Difficulty

During the year the technical evaluation assistance team worked with states on evaluation for special populations a number of problems were identified. A number of state people working in evaluation in several states were asked to provide their perceptions of the level of difficulty of these problems. This ranking was done informally on an individual basis over a period of several months. Each person was asked to rate the degree of difficulty it posed to that individual's agency. Some twenty experienced evaluators participated in this exercise.

Following is the order of ranking with the most difficult listed first and the least difficult listed last.

Rank	Problem	Mean
1	Conducting longitudinal follow-up of special populations	3.65
2	Measuring student achievement of special populations	3.56
3	Securing adequate financial support to perform evaluation of programs and services for special populations	3.42
4	Securing organizational support for the evaluation of programs and services for special populations	3.23
5	Securing personnel to perform evaluation of programs and services for special populations	3.18
6	Determining criteria for the evaluation of programs and services for special populations	3.00
6	Determining criteria for the evaluation of programs and services for special populations	3.00
6	Using special population evaluation information	3.00
9	Constructing/developing evaluation instruments for evaluation of programs and services for special populations	2.95
10	Interpreting results of evaluation data about special populations	2.89

Rank	Problem	Mean
10	Understanding the requirements of pertinent legislation regarding the evaluation of special populations	
12	Determining special population enrollment according to the VEDS classification at the USOE six-digit code	2.84
13	Performing process evaluation of special populations	2.79
14	Preparing reports regarding evaluation of programs and services for special populations	2.78
15	Preparing a well-defined and systematic plan regarding evaluation of programs and services for special populations enrolled in vocational education	2.75
16	Determining special population enrollment according to the VEDS classification at the USOE two-digit code	2.64
17	Determining program accessibility	2.58
17	Conducting student follow-up of special populations	2.58
19	Analyzing results of evaluation data about special populations	2.50

Notes

1. Federal Register, Vol. 42, No. 6 (May 4, 1977), p. 22679.

2. Selected elements of the evaluation matrix were included in the content of the self-evaluation instrument. Elements which are not generally the responsibility of state evaluation units were purposely excluded.

CHAPTER IV

DISTINCTIVE FEATURES OF EACH STATE VOCATIONAL EVALUATION SYSTEM

This chapter presents a brief summary of the distinctive features of each cooperating state's vocational education evaluation system. Discussion includes both the secondary and postsecondary systems except in Alabama where the postsecondary evaluation system is still under development and is now being pilot tested.

Alabama

Under the Division of Vocational Education Services the leadership role of evaluating vocational programs in the state lies with the Research Coordinating Unit (RCU) in coordination with the Management Information Service (MIS) and the Program Supervision Unit (PSU), as shown in Figure 5.

Management Information Service (MIS)

The MIS compiles and publishes enrollment and follow-up data. The MIS supplies standard forms and standard instructions to local program administrators for reporting enrollment data and conducting an annual follow-up study and for reporting the results to state staff. The state furnishes local vocational directors and staff with labor market demand and supply data and follow-up data for use in preparing their annual program applications. The MIS also furnishes the district vocational specialists with data collected to help them in their review of local vocational programs.

Program Supervision Unit (PSU)

The district vocational specialists under the PSU conduct the first phase of the program review by making an analysis of each vocational program in the local school being studied. This is preceded by a self-evaluation by each teacher and followed by an on-site review team.

The program review instrument completed by the district specialist is made available to the appropriate review team members

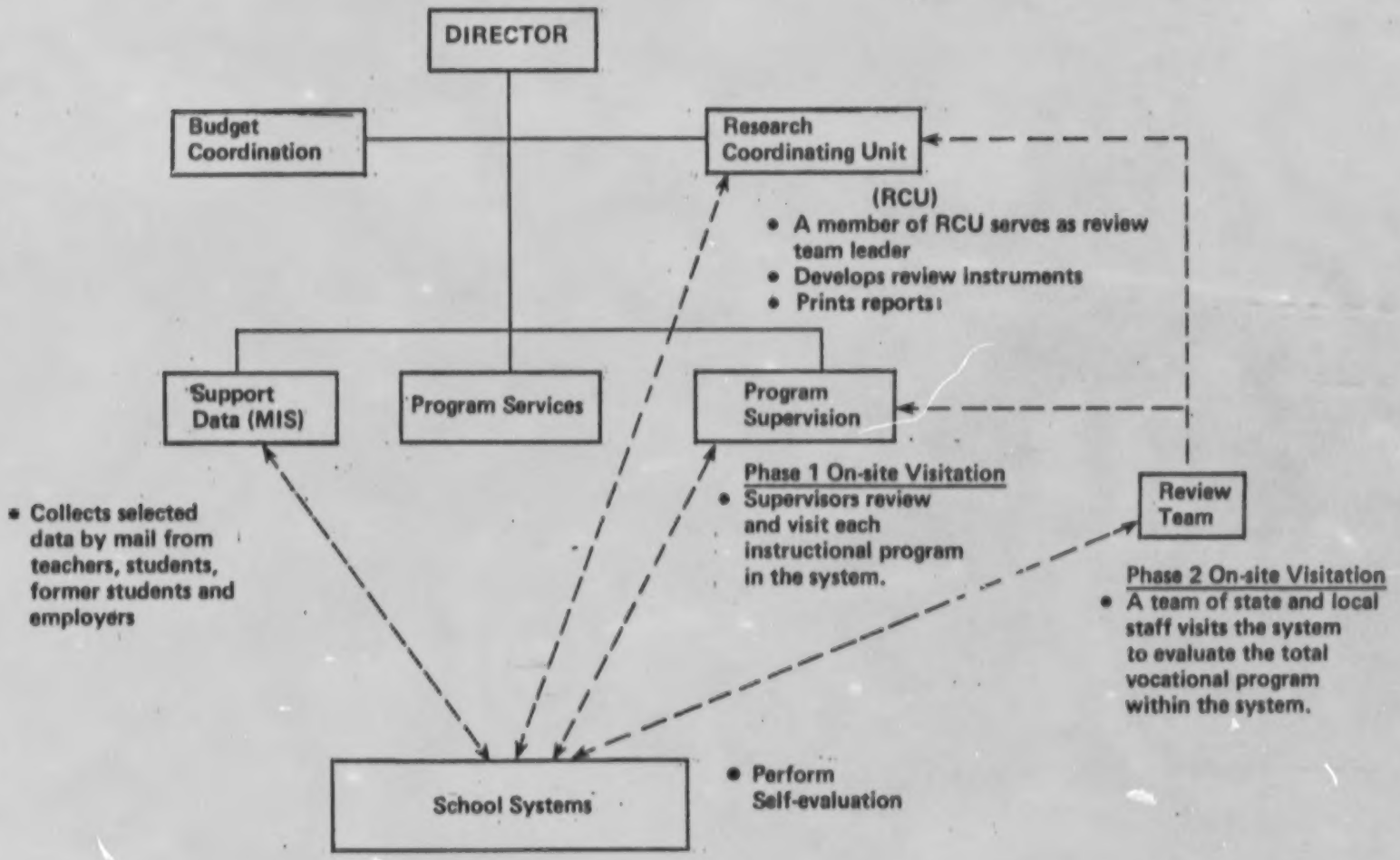
DIRECTOR
Budget Coordination
Research Coordinating Unit
(RCU)
• A member of RCU serves as review team leader
• Develops review instruments
• Prints reports
Support Data (MIS)
Program Services
Program Supervision
Review Team
• Collects selected data by mail from teachers, students, former students and employers
Phase 1 On-site Visitation
• Supervisors review and visit each instructional program in the system.
Phase 2 On-site Visitation
• A team of state and local staff visits the system to evaluate the total vocational program within the system.
School Systems
• Perform Self-evaluation

Figure 5. Organizational chart of the Alabama Division of Vocational Education indicating secondary evaluation functions.

prior to the team interviews. The review team members study the completed instrument and plan the interviews. In addition, the summary sheets completed by the district specialists are reviewed by the team leader.

Research Coordinating Unit (RCU)

The RCU takes the leadership role in the total vocational education evaluation system. It develops evaluation instruments for use by district vocational education specialists and the on-site review team. It assumes a leading role in the on-site team review.

The review team consists of state department members, local staff from other systems, and sometimes teacher educators and employers. An average of ten members compose a team, and a member of the RCU serves as review team leader. The main purpose of this review is to evaluate the total vocational program within a local school system.

Basically, the following procedures are followed in conducting on-site team review visits:

1. The team leader consults with district vocational education specialists regarding the results of program review. He/she collects and reviews pertinent information relative to the specialist visit and of importance to the work of the team reviews.

2. Prior to the actual on-site review, the team leader makes a planning visit to orient local school staff members to the objectives and procedures of the on-site review. He/she also collects selected information necessary for planning the interview schedule and work of the review team.

3. Immediately preceding the on-site review, the team leader conducts a team orientation which includes a review of the pre-visit information, a summary of the district specialist's reviews, and interview scheduling.

4. The on-site review consists primarily of interviews conducted over a two-day period.

5. Using a prepared interview schedule, review team members interview local administrators, counselors, vocational teachers, vocational and non-vocational students, former

students, board members, advisory council members, and employers. In larger systems, only a sample of teachers may be interviewed.

6. A report, regarding the findings of the visit, is prepared by the team members. The report contains findings, recommendations, and suggested activities. At the end of the review, the team leader gives an oral preliminary report to the local superintendent and selected staff.

7. The report is written, printed, and distributed to local superintendent, who receives multiple copies, and to selected state staff.

8. Local staff review the report and develop tentative follow-up plans in response to the recommendations.

9. Appropriate state staff assist the local staff in developing the tentative follow-up plan.

10. The state vocational director and the team leader meet with the local superintendent and other local staff to finalize the follow-up plan.

11. The district specialist and appropriate state staff provide technical assistance to local staff in implementing the follow-up plan and they monitor progress.

California

In California, there are two delivery systems for vocational education. At the secondary level, delivery of vocational education lies with the State Department of Education, specifically, the Vocational Education Division. At the postsecondary level, it lies with the California Community Colleges' System under the Office of the Chancellor. In view of the foregoing organizational arrangement, there are two systems for the evaluation of vocational education.

Secondary Vocational Education Evaluation

Responsibility for developing, initiating, and coordinating the secondary vocational education evaluation system in California lies with the research and evaluation consultant in the Support Services Vocational Education Unit. This individual, with the involvement and assistance of a number of people in the department and in close coordination with postsecondary evaluation, established the system

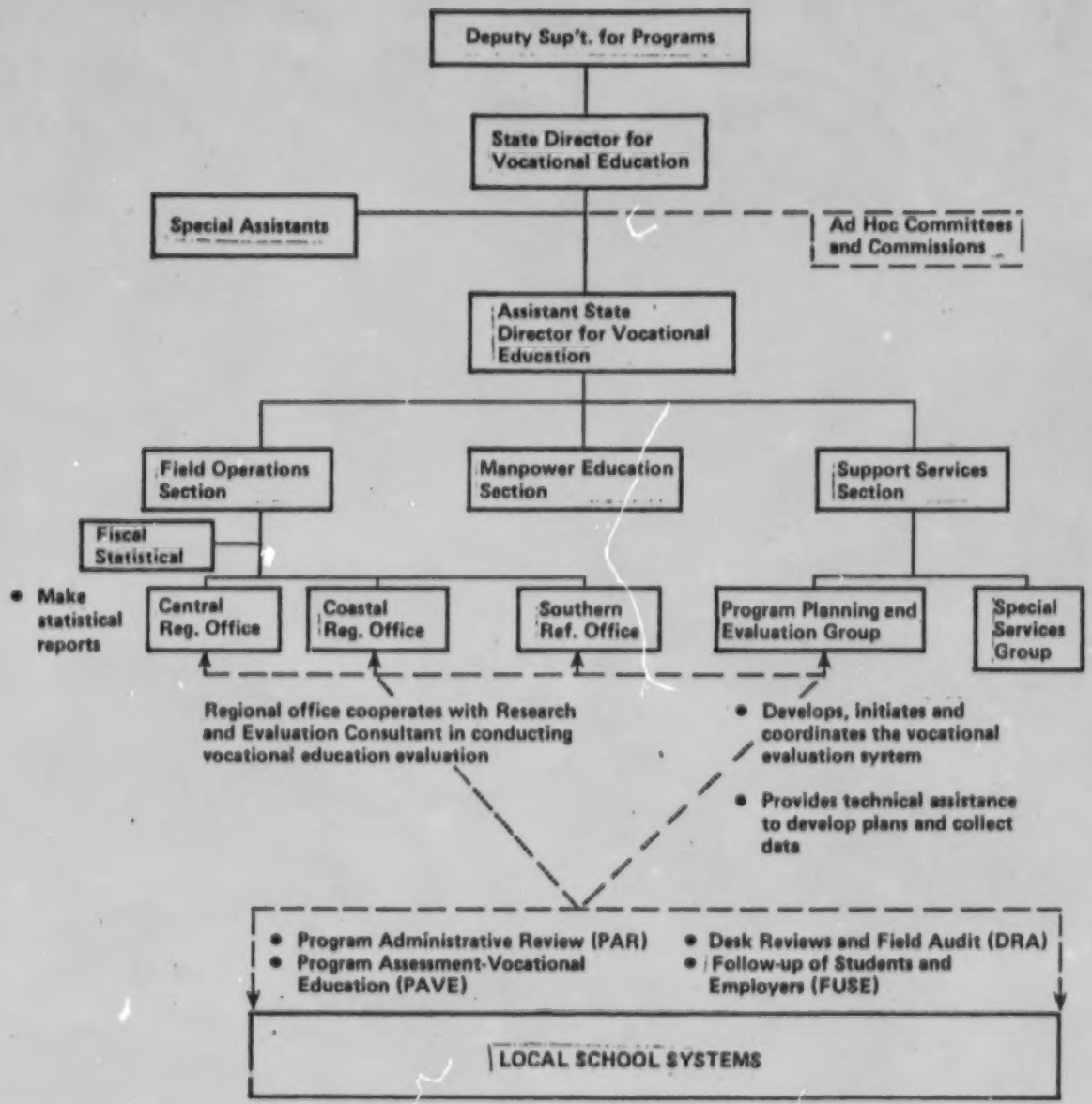
Deputy Sup't. for Programs
State Director for Vocational Education
Special Assistants
Ad Hoc Committees and Commissions
Assistant State Director for Vocational Education
Field Operations Section
Manpower Education Section
Support Services Section
Fiscal Statistical
Make statistical reports
Central Reg. Office
Coastal Reg. Office
Southern Ref. Office
Program Planning and Evaluation Group
Special Services Group
Regional office cooperates with Research and Evaluation Consultant in conducting vocational education evaluation
Develops, initiates and coordinates the vocational evaluation system
Provides technical assistance to develop plans and collect data
Program Administrative Review (PAR)
Program Assessment-Vocational Education (PAVE)
Desk Reviews and Field Audit (DRA)
Follow-up of Students and Employers (FUSE)
LOCAL SCHOOL SYSTEMS

Figure 6. Organizational chart of the vocational education unit indicating the secondary education evaluation functions.

described in this section. The personnel who conduct the sample verification visit of the Program Assessment - Vocational Education (PAVE) are furnished by the Field Operation Section of the Office of Vocational Education. This section, which has three regional offices, provides technical assistance to districts in developing plans, collecting data, improving program management and accountability, making statistical reports, and performing evaluation. The Field Operations Section works cooperatively with the Office of Program Evaluation Research of the State Department of Education (see Figure 6).

California's system for evaluating vocational education at the secondary level includes four major activities: (1) the Program Administrative Reviews (PAR), which provide for documenting efficient administrative practices; (2) the Program Assessment Vocational Education (PAVE), which is an evaluation of instructional program effectivenss; (3) the Desk Review and Field Audit (DRA), which reviews accounting procedure; (4) and the Follow-up of Students and Employers (FUSE).

To accomplish the accountability plan, California divided its districts and regional programs into four groups. Each group was designed to be representative of the public agencies which deliver vocational education services in the state. It was thought that by gathering administrative, vocational instruction programs, accounting, or student follow-up information from any one of the four sample groups in any one year, accurate estimates can be made about how all of the districts and regional occupational centers and programs (ROC/Ps) stand on all areas of inquiry.

Program Administrative Review (PAR). PAR was designed to insure that each administrative unit--the school district or regional occupational program administration--takes those measures necessary for the proper administration of vocational education funds. PAR is applied at the central administrative level, that is, the school district or regional occupational program central administrative office. PAR attempts to help vocational education coordinators and other administrators understand the laws and regulations under which they operate.

PAR serves the dual purpose of informing instructional service agencies of their administrative obligations and of providing a means for helping them to devise methods for supplying the documentation and records necessary to satisfy audit requirements.

Each school district and regional occupational unit in the PAR sample is visited by a state consultant. Using a comprehensive interview and observation schedule, the consultant determines how well the local agency is meeting the requirements for record keeping and fiscal administration. Ways of improving district administrative practices are suggested, and a written report of recommendations is made to each agency. Subsequent follow-up is done to determine the courses of action that agencies have adopted in response to recommendations and their effectiveness. A final letter of agency status regarding PAR is sent after the follow-up.

Program Assessment - Vocational Education (PAVE). PAVE describes and determines the effectiveness of the educational process for each instructional program. Each year one of the four groups is involved in this process.

The first part consists of obtaining evaluation information from each program. Each program in each school or regional occupational unit responds to a questionnaire. The questionnaires are sent through the regular school or regional program distribution system. Those completing the questionnaires are requested to consult and/or solicit the help of teachers who provide the program instruction. Questionnaires are assembled by each district and regional occupational unit and mailed to the vocational education unit. A questionnaire is required from a specific program once in a four-year period.

The second part of PAVE consists of a visit by program area specialists in agriculture, office, distributive, consumer and homemaking, occupational related homemaking, industrial, health, industrial arts, and work experience education to a sample of questionnaire respondents. These specialists verify and amplify the program reports by observing facilities and services and by questioning students, teachers, counselors, and administrators.

Area specialist visits are designed to cause the least disruption possible to instructional programs, but it is necessary to talk to individual instructors and counselors and to obtain brief questionnaire responses from students.

The program area specialists summarize their observations in oral and written reports which are delivered to the school or regional unit to help the selected local personnel in making instructional program review.

Desk Audits and Field Review (DRA)

DRA requires that all participating administrative units submit selected financial reports to the State Department of Education for review. These records include analytical statements of vocational education program expenditures for the disadvantaged, the handicapped, and other target groups.

In the event that difficulties are encountered in understanding the records, a state agency representative calls on the district or regional program office and completes the work on-site.

In addition, DRA includes an on-site review of the financial records of a small sample of public educational institutions receiving financial assistance under Public Law 94-482 and Public Law 94-40. These sample reviews are performed by an independent outside contract agency.

Desk reviews and field audit activities are scheduled in advance. Institutions involved are informed of their involvement ahead of time so that they can assemble and present required records.

When record keeping discrepancies or irregularities are found, effort is made to confer with the institution on ways to correct or overcome the problems.

Follow-up of Students and Employers (FUSE). FUSE conducts a questionnaire survey of former vocational education students (completers and leavers) which provides information for the participating district or regional occupational program. This information helps them justify and improve their programs and furnishes data for annual reports to the national Vocational Education Data System.

Prior to completing vocational education programs, students are informed by their teachers about the follow-up study and encouraged to respond to questionnaires that might be sent out from their schools.

In the year that they participate in FUSE, districts and regional programs prepare rosters of previous year participants which contain the necessary address and telephone locator information for sending questionnaires. The roster matches the previous year's statistical report of student completers and leavers by program (Vocational Education 48 for districts and the equivalent for regional occupational programs).

The materials needed to conduct the survey (questionnaires and master cover letters) are prepared by the state and forwarded to the participating units. The units conduct two mailings two weeks apart.

The district or regional occupational program responsibility is completed by conducting a brief telephone survey of a sample of those not responding to the mailed questionnaires.

Questionnaires and telephone survey forms are analyzed by the state, and a report is sent to each participating district.

Districts help conduct surveys of those employers identified in the student questionnaires. Questionnaires are mailed and a follow-up to those who have not responded within a two-week period is mailed out. Results are analyzed by the state and a report sent to each participating state.

Postsecondary Vocational Education Evaluation

At the postsecondary level, the leadership role for conducting vocational evaluation lies with the Office of Program Evaluation and Approvals. Through its evaluation specialist, it provides technical assistance in evaluation to community colleges. The office also works cooperatively with the Office of College Services especially in terms of providing assistance in implementing recommendations. Additionally, the evaluation activities are conducted in conjunction with the Chancellor's Office Information System (see Figure 7).

Basically, two methods are employed at community colleges to evaluate vocational education programs. These are the Community College Occupational Programs Evaluation System (COPES) and the Student Accounting Model (SAM). Additionally, the Program Administration Review (PAR) instrumentation developed by the secondary system is used to address compliance of college programs.

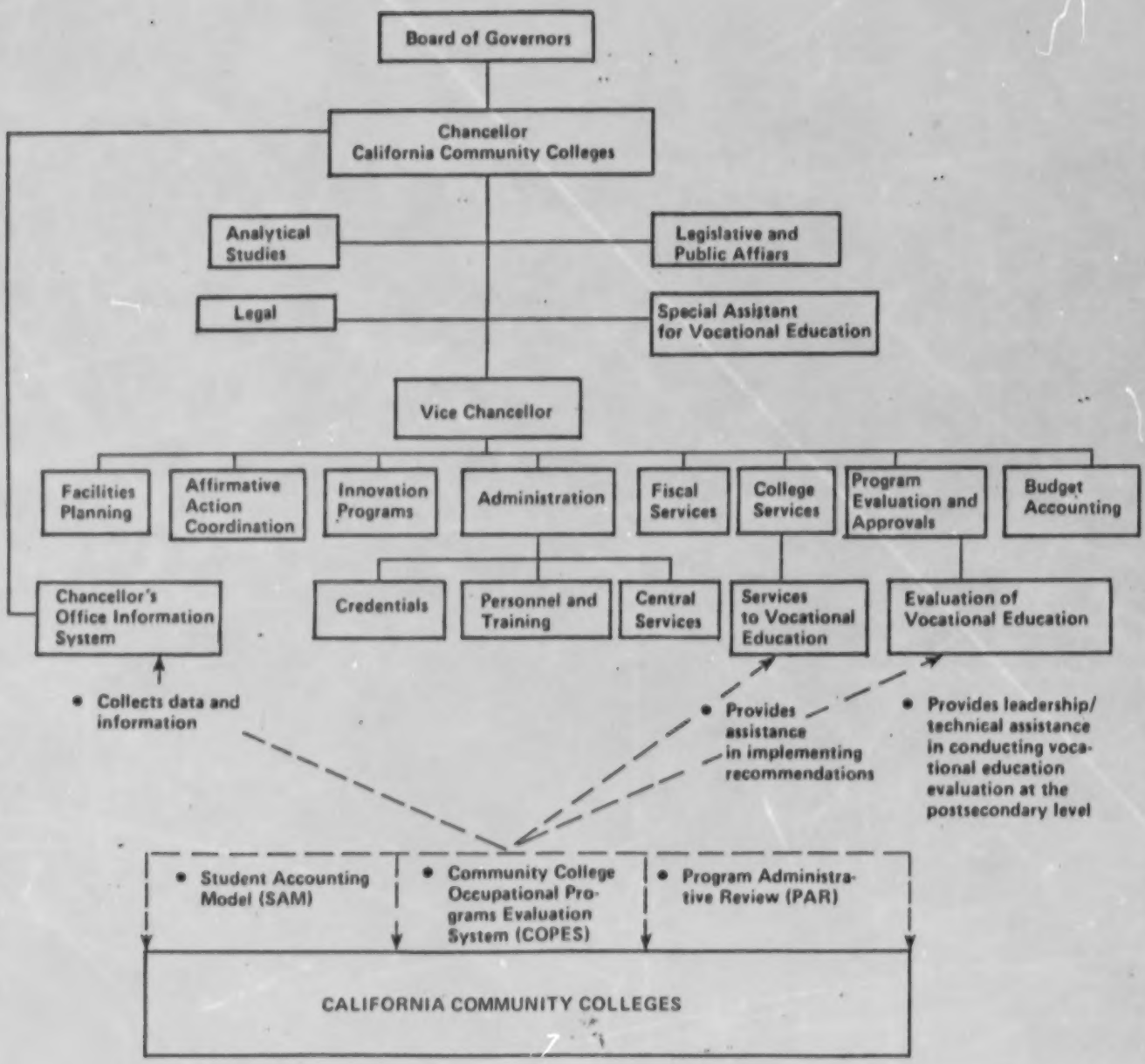

Figure 7. Organizational chart of the California community colleges indicating the postsecondary vocational education evaluation functions

Community College Occupational Program Evaluation System (COPES). COPES was established in 1971 as a cooperative undertaking of community college leaders and the Chancellor's Office of the California Community Colleges. Since then the system has been applied at a majority of all of the community colleges of the state. The basic goal of COPES is to improve the quality and availability of occupational education in California community colleges. The system has been modified to reflect the quantitative requirements of Sec. 112 of the vocational education legislation of 1976. Plans for the validation process of COPES have been severely curtailed due to fiscal limitations imposed as a result of Proposition 13.

Student Accounting Model (SAM). SAM is a system of procedures (or model) constructed for the purpose of improving occupational student follow-up in California community colleges. The model has been sponsored by the Chancellor's Office and developed by a consortium of twelve leaders in California Community Colleges. A fundamental component of the model is a uniform method for classifying courses and identifiying occupational majors so that non-continuing students can be categorized for various approaches to follow-up.

Colorado

The major responsibility of conducting a systematic and effective vocational education evaluation for both secondary and postsecondary programs lies with the Occupational Education Division of the Colorado State Board for Community Colleges and Occupational Education. Within the division, the following branches are involved in the process: Planning and Support Services Branch and Program Services Branch (see Figure 8).

Planning and Support Services Branch (PSSB)

The PSSB performs two basic functions in the total vocational evaluation system. First, the branch develops and compiles an annual accountability report which addresses, among other things, legislative requirements. Second, through its MIS, it meets requests of local and vocational directors and staff, state staff, and legislators with approximately 100 standard reports and 1,200 special reports each year. Part of its standard reports include enrollment and placement data. The system also produces "special" statistics like effectiveness ratios and efficiency ratios. A committee of secondary and postsecondary local vocational directors and staff regularly review data collection by the system and call for any necessary modifications.

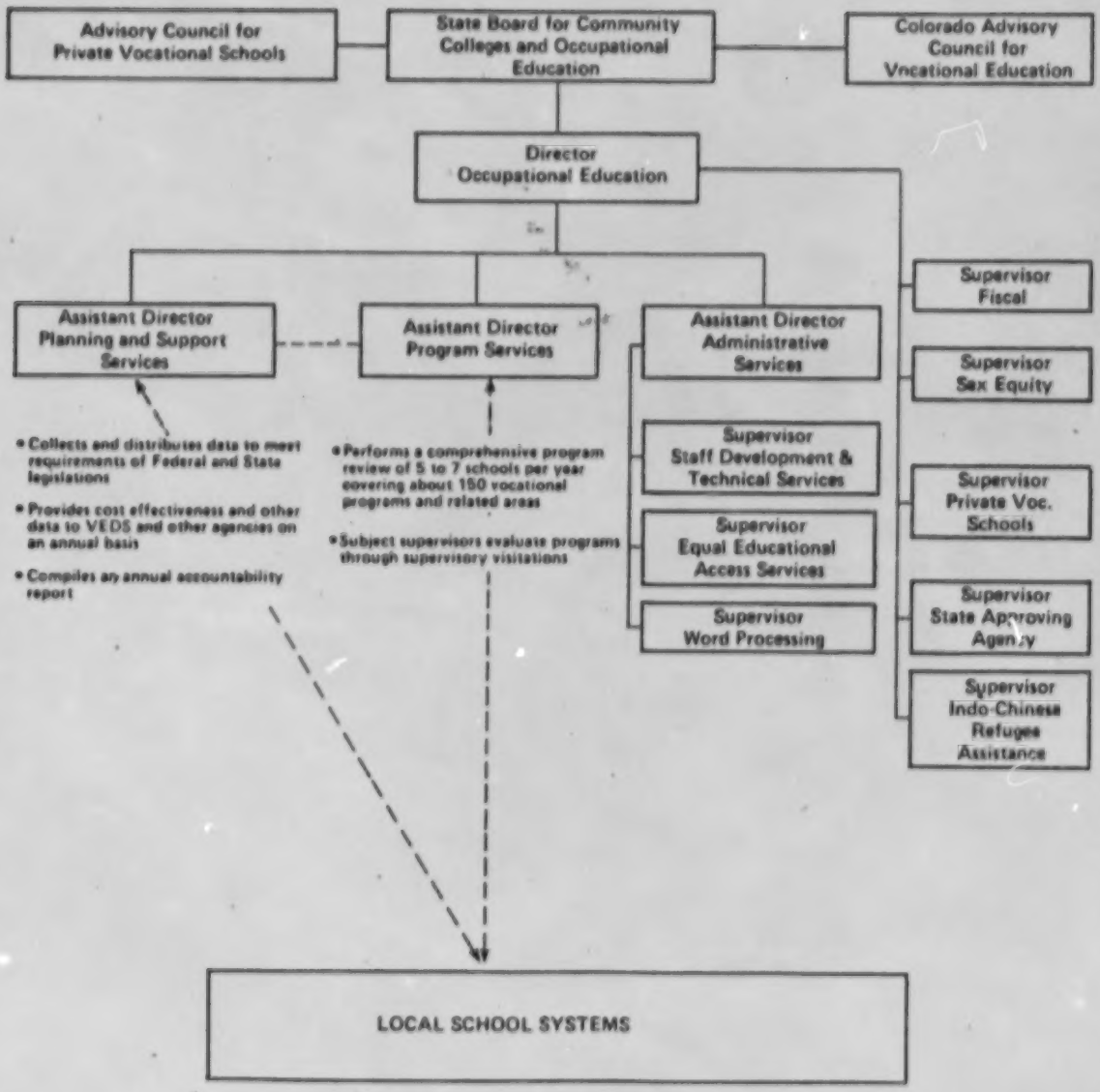
Advisory Council for Private Vocational Schools
State Board for Community Colleges and Occupational Education
Colorado Advisory Council for Vocational Education
Director Occupational Education
Assistant Director Planning and Support Services
Assistant Director Program Services
Assistant Director Administrative Services
Supervisor Fiscal
Supervisor Sex Equity
Supervisor Staff Development & Technical Services
Supervisor Private Voc. Schools
Supervisor Equal Educational Access Services
Supervisor State Approving Agency
Supervisor Word Processing
Supervisor Indo-Chinese Refugee Assistance
• Collects and distributes data to meet requirements of Federal and State legislations
• Provides cost effectiveness and other data to VEDS and other agencies on an annual basis
• Compiles an annual accountability report
• Performs a comprehensive program review of 5 to 7 schools per year covering about 150 vocational programs and related areas
• Subject supervisors evaluate programs through supervisory visitations
LOCAL SCHOOL SYSTEMS

Figure 8. Organizational chart of the Colorado community colleges and occupational education indicating vocational education evaluation functions.

Program Services Branch (PSB)

The PSB handles the supervisory visits and the Comprehensive Program Review. Specialist area supervisors receive data reports from the MIS to help them in reviewing the local vocational programs under their supervision. Using prepared checklists, supervisors review programs in their service area where CPRs are not being conducted. The area supervisors also conduct cross-site analyses of the data they collect during their site visits in order to identify common problems and strengths among the local vocational education programs. Further, the supervisors play a major role in the CPRs by serving as visiting team leaders or coordinators of several visiting teams.

Colorado performs a comprehensive program review of five to seven schools per year covering about 150 vocational programs and related services.

The Comprehensive Program Review (CPR) consists of three phases. Phase I is preparation for evaluation; Phase II is on-site visitation; while Phase III is follow-up procedures. Basically, it employs two evaluative methods: process method and product method.

Connecticut

The state of Connecticut does not directly evaluate the schools and institutions that offer vocational education. Instead, a state initiated self-evaluation exists for local agencies that receive federal funding. The Division of Vocational Education, through the Bureau of Vocational Services, reviews 20 percent of those evaluations annually. The state-operated regional vocational-technical schools are evaluated by an independent accrediting association--the New England Association of Schools and Colleges. At the same time, the division also maintains a management information system through its Bureau of Vocational Program Planning and Development (as shown in Figure 9).

Vocational Program Planning and Development (VPPD)

The bureau collects and processes statistical program data for state and federal statistical reports and for program planning. A follow-up study of all vocational graduates is conducted annually

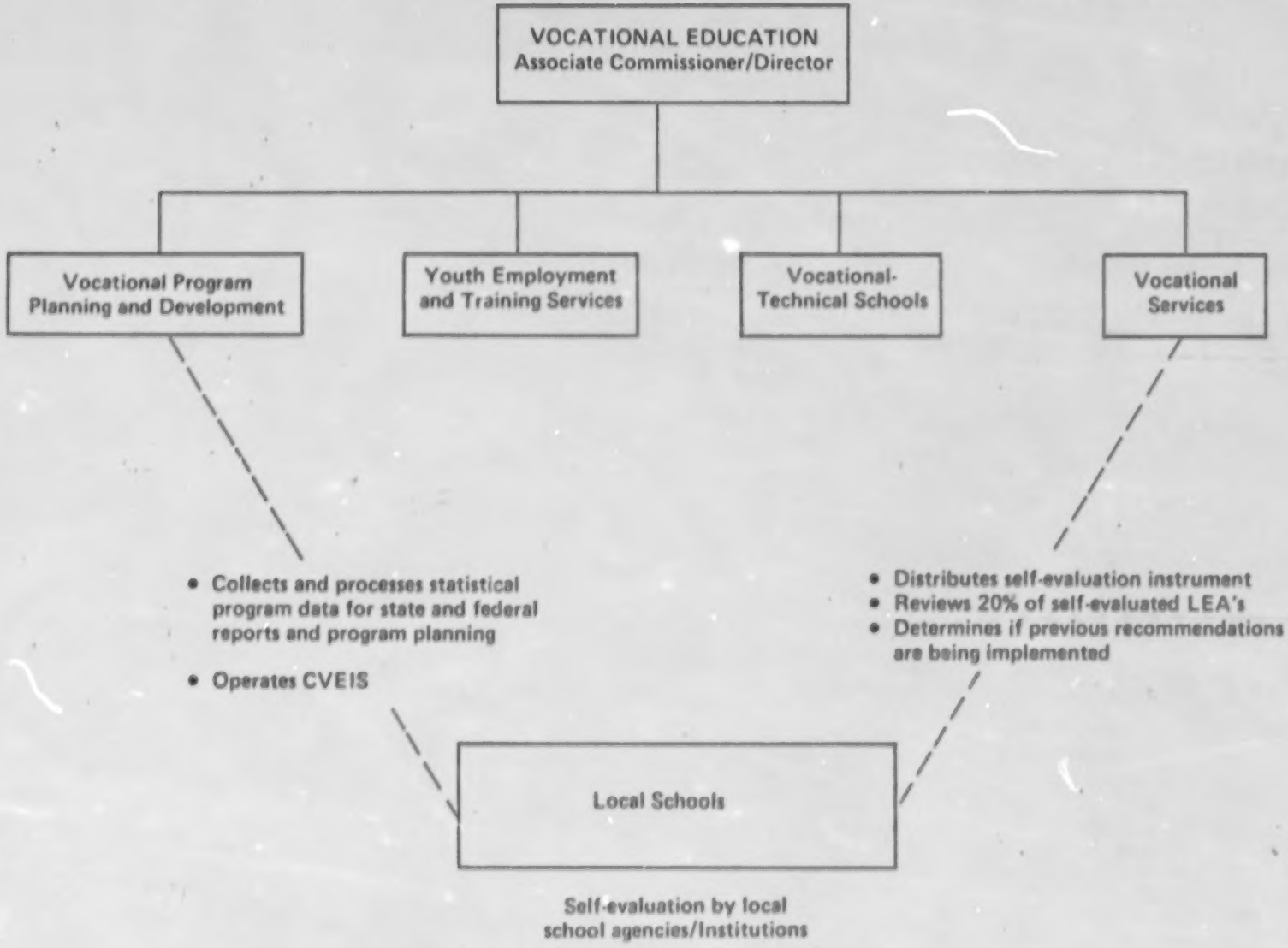
VOCATIONAL EDUCATION
Associate Commissioner/Director
Vocational Program Planning and Development
Youth Employment and Training Services
Vocational-Technical Schools
Vocational Services
• Collects and processes statistical program data for state and federal reports and program planning
• Operates CVEIS
• Distributes self-evaluation instrument
• Reviews 20% of self-evaluated LEA's
• Determines if previous recommendations are being implemented
Local Schools
Self-evaluation by local school agencies/Institutions

Figure 9. Organizational chart of the Connecticut Division of Vocational Education indicating evaluation functions.

and a report of the results is published. The staff also assists in the development of research and exemplary program proposals and in the evaluation of such programs. A comprehensive management information system (CVEIS) is also operated by the bureau for the Division of Vocational Education.

Bureau of Vocational Services

The bureau distributes a "Manual for Self-Evaluation of Vocational Education Programs" to all local education agencies. Twenty percent of the self-evaluated LEAs are reviewed annually following this procedure:

1. Appropriate local, state, and State Advisory Council for Vocational Education officials cooperatively evaluate programs through on-site visitations.

2. Evaluation reports containing recommendations are made by the group and are provided to local education agency (LEA) administrators, State Advisory Council, and the chairperson of the local advisory council.

3. Each LEA, agency, and institution is requested to provide in its annual plan information pertaining to the use of evaluation results.

4. At the end of the year, a follow-up instrument is distributed to those LEAs/agencies whose programs were evaluated the previous school year. The purpose is to determine if previous recommendations are being implemented.

CHAPTER V

STATES' EFFORTS TO IMPROVE VOCATIONAL EDUCATION SYSTEMS-- AN UPDATE REPORT

The purpose of the National Center Technical Evaluation Assistance Project was to assist states in identifying and solving problems associated with their evaluation systems. Year I of the project involved California, Alabama, Colorado, and Maine. Several visits were made to these states in order that project staff could observe the evaluation system and interview state staff, members of state advisory councils, local administrators, and vocational teachers. Project staff also collected relevant documents which were analyzed in an attempt to determine the effectiveness of the evaluation system.

On the basis of the above observation and document reviews each state's evaluation system was analyzed. Each state analysis contained a brief explanation of the problem, several alternative solutions, and the advantages and disadvantages of each solution as viewed by the project staff. States were encouraged to use these alternatives as a starting point to begin mapping strategies for improving their evaluation efforts.

Project staff met with coordinators of evaluation and vocational administrators to determine the technical assistance which would be most appropriate in the improvement process. Approximately nine months later project staff assessed the extent to which each state had initiated actions designed to solve the problems identified in the Year I final report. This is a report of the states' efforts to strengthen the weaknesses seen in their evaluation systems.

Alabama

Alabama used the school year of 1977-78 to develop and field test an evaluation system for vocational education. The staff of the Research Coordinating Unit were mainly responsible for this work. In May of 1978, the technical assistance project staff had an opportunity to observe one of the field test program evaluations in an area vocational school and to be involved in analyzing what had

been learned in the test and in discussing solutions for apparent weaknesses. Following are the major problems identified and the solutions adopted.

Problem 1: How to increase the involvement of a variety of people in evaluation of programs.

Explanation: At the time this problem was identified, it was state policy that only selected state staff and local vocational administrators could serve on evaluation teams. Teams were observing programs and interviewing teachers, students, administrators, and employers. While on the surface this might appear to be fairly extensive representation, the final decision as to what was written into the evaluation report depended entirely on individuals strongly influenced by feelings toward perpetuation of the present system. This does not question the dedication of those individuals to improvement, but it does indicate the potential for a singleness of viewpoint. A panel with more diverse backgrounds could be expected to view needed changes from different perspectives and at least expand the list of possible alternative solutions. Another consideration in choosing individuals to serve on teams would be to select individuals representative of the special needs populations participating in programs or needing training. This would provide a view of programs and needs which might be quite different from the commonly expressed opinions.

Results: The evaluation systems as presently constituted shows greatly expanded involvement of many diverse individuals. The original policy was changed to allow representation by many individuals having an interest in vocational education.

Presently team doing program reviews may be made up of state staff, teacher educators, graduate students in teacher education, local administrators and teachers--both vocational and non-vocational--special education staff, employers, counselors, and members of the State Advisory Council for Vocational Education.

Problem 2: Follow-through on recommendations.

Explanation: This problem seemed to stem from the fact that state evaluation guidelines were not clear on at least two points: (1) who at the state level was responsible for working with local administrators and teachers to see that recommendations of the evaluation team were carried out, and (2) what mechanisms were to be used to let state planners and evaluators know what recommendations

were implemented and what were the results of that implementation? Communicating the recommendations of the evaluation team to those responsible for their implementation at both the state and local levels was also a part of this problem.

Results: Alabama evaluation staff developed a system for follow-through on recommendations of the evaluation teams and started to test that system in school year 1978-79. Briefly this procedure involves a visit by an evaluation staff member and several subject matter specialists to each school a few months after the school has participated in a team review. This visit has two purposes: (1) to receive a report from the local administration on what the school plans to do to implement the recommendations of the review team, and (2) to determine assistance needed from the state staff. Early tests of the system showed varying levels of success. Some schools had given a great amount of thought as to how improvements in vocational programs could be implemented while other schools had given very little consideration to the problem.

After the year's trial period a more formalized procedure was developed. The major points of the newly implemented system are the involvement of the state director of vocational education and a statement of very specific procedures to be followed to ensure the effectiveness of the follow-through process.

Problem 3: Communication and cooperation between the evaluation unit and the planning unit and between evaluation and the Management Information System (MIS).

Explanation: It must be kept in mind that organizational units do not communicate or cooperate--people do. When project staff talked with individuals in the MIS and in planning, it was found that they had little knowledge of what the evaluation section was planning or what would be required of them. This was entirely understandable in that the evaluation staff was still not sure what the needs would be or what evaluation could contribute to planning. The need to keep significant others informed was pointed out to the evaluation staff by the technical assistance project staff in person and by written report. State staff agreed with the project staff but questions of how this was to be accomplished came from the state director and those working in the units involved (planning, evaluation, and MIS).

Results: Very little progress had been made in establishing full communication between these three functional entities in the vocational department. Project staff recommended that if the

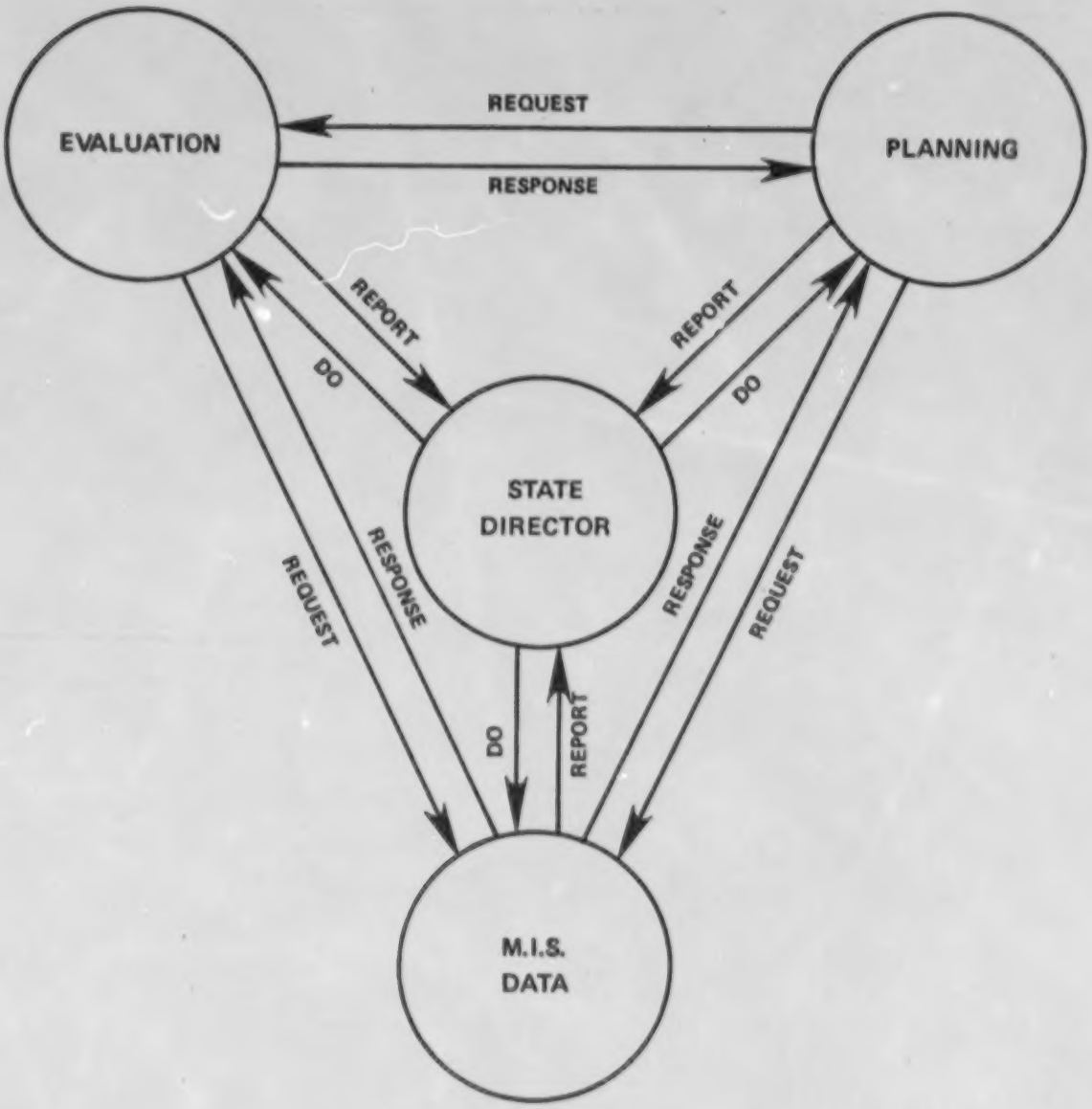

Figure 10. Evaluation information flow.

informal communication process failed to work, a more formal procedure should be installed. This procedure is illustrated in Figure 10. This figure shows how a series of requests for specific information with critical timelines and a method of response can provide essential information to all parties. The state director plays a critical role in monitoring the flow of requests for information and responses to those requests. The newly appointed state director of vocational education has indicated that this, and other evaluation problems yet unsolved, will be priority areas for his efforts in the department.

Problem 4: How to assure communication on changes made and results observed.

Explanation: Those directing the evaluation effort need feedback on which recommendations have been implemented and the results of the actions taken. This information is needed for several reasons. If service to schools is to improve through the evaluation effort, the results of the recommendations made by its teams must be known. If no improvement resulted from implementation of recommendations, then changes must be made in teams and recommendations.

The evaluation system needs proof that it is in fact bringing about changes which result in improved vocational training for students. Like all other parts of the organization, evaluation needs evidence that it is reaching its objectives, and feedback on improvements recommended and implemented is an important part of that evidence.

Another reason it is important to know about results of recommendations and assistance is that such feedback information can be used in making state level decisions. By compiling statewide information, the evaluation unit is in a position to recommend where expenditure of support funds could be expected to produce the greatest results. Administrators face many demands for funds. Information which identifies the most common needs and most effective treatment will be of great assistance in making those decisions.

Results: The procedures outlined in the paper entitled "Technical Assistance Responsibilities of State Staff Related to Vocational Program Review" were an attempt to establish a system to alleviate this problem. This plan closely follows the conceptualization shown in Figure 11. Information on programs is fed from the local school to the evaluation section by both the information system and the review team. Recommendations flow back

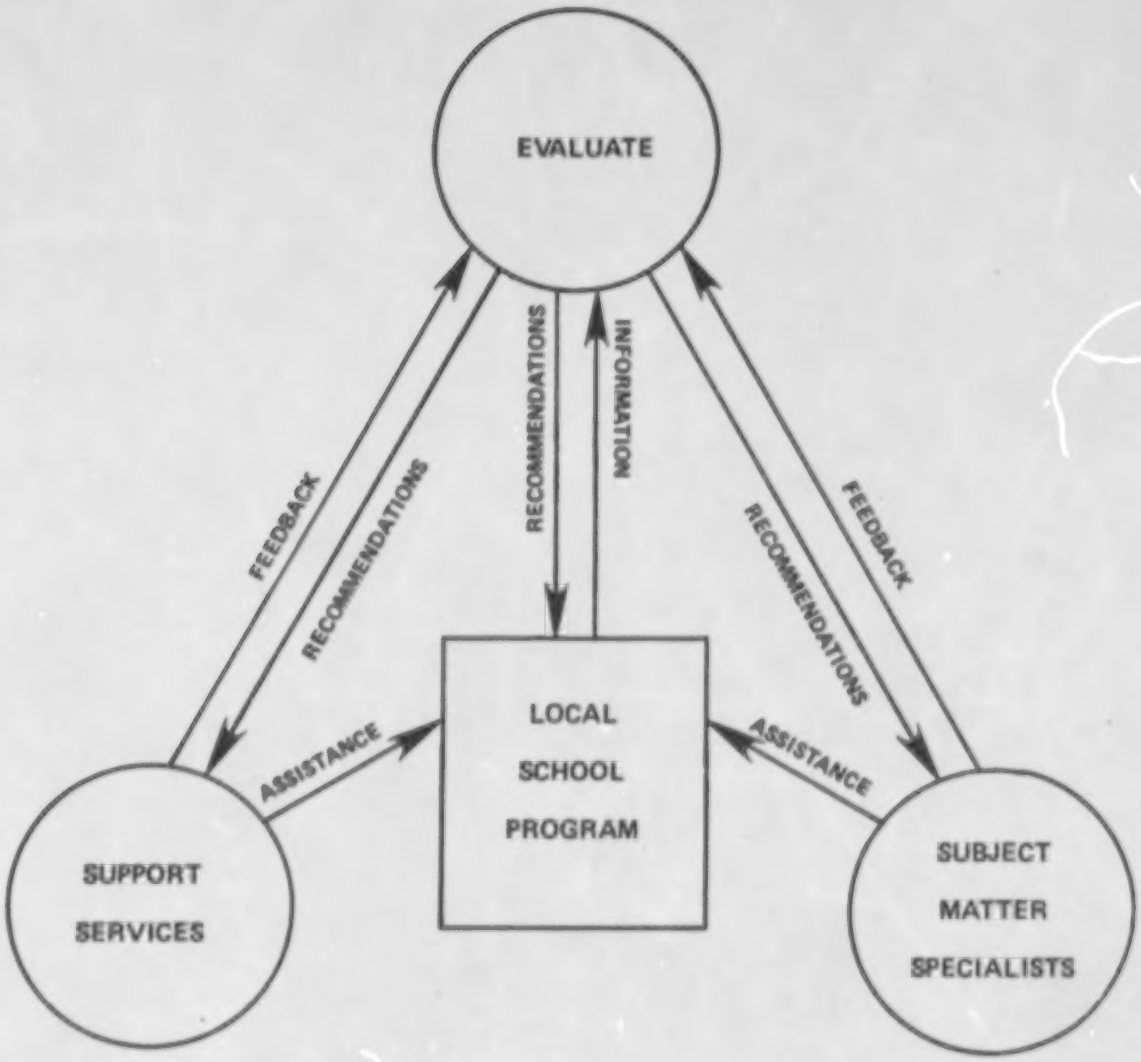

Figure 11. Information flow-state vocational department.

to the school but also to the field representatives of the state staff. Assistance is provided by the field staff, and the results of the changes are reported to the evaluation staff. A second review of local effort is seen in the annual application which the local school submits. In the application the school is required to indicate actions taken in response to the evaluation recommendations.

Problem 5: Improvement of evaluation instruments.

Explanation: As in any new system, there is always a need for revision and improvement. In fact, the purpose for testing the newly developed procedures and instruments is to identify changes that need to be made. Several problems with the original instruments were identified. These problems included the following:

1. The self-evaluation instrument was too long and detailed.

2. The supervisory instrument required a "yes" or a "no" answer to all questions when some other response might have been more appropriate.

3. Some questions were multiple questions and, therefore, very difficult to answer.

4. Instruments did not provide sufficient information on special services for special needs populations.

5. The relationship between program standards and evaluation instruments was not always clear.

Results: All instruments used in the evaluation have been revised. Project staff, along with individuals who used the forms or responded to the forms, made suggestions as to how they might be improved.

The following are criteria used in revision of the instruments:

1. Every question must gather information critical to making decisions or reporting.

2. Any questions not getting uniform or clear response must be rewritten.

3. Questions with "yes" or "no" answers must be avoided.

4. Questions requiring judgments should have a scale to allow for several levels of answers.

5. Each item must ask only a single question.

6. Questions on services to special populations should cover access, participation, process, and outcomes of programs.

7. A system of numbering should be developed to match the system used in the program standards designations.

In the case of the instrument used by supervisors to review programs the "yes" or "no" response was changed to allow for a three-level choice. All questions were reduced to a single item response. A series of questions dealing with accessibility, practices, and outcomes for special needs populations has been provided by project staff. These are being reviewed to select those that will be included. An interview guide has been developed to be used by team members in interviewing individuals.

Particular attention has been given to assuring that instruments collect information needed to evaluate programs and services for special populations. Questions that indicate access, participation, services, and outcomes of programs for all categories of special populations have been included in evaluation instruments.

Problem 6: Changes needed in the postsecondary evaluation system.

Explanation: The postsecondary staff had one major question: Does the accreditation done by the Southern Association of the Colleges and Universities meet the evaluation requirements of the federal legislation and the state vocational education department? They were aware of the need to follow up students. This was being done in the technical colleges but not in the community colleges. Postsecondary staff were in the process of preparing to follow up all vocational students in postsecondary vocational education.

At the suggestion of the postsecondary personnel, the National Center project staff prepared and presented a listing of what was required by the federal legislation in the form of evaluation. After review of these requirements, it was concluded by the postsecondary division that at least minimum requirements were being met.

The project staff recommended that those in charge of postsecondary vocational education give careful consideration to the development of a more comprehensive evaluation program.

Results: The administration of the Department of Education has given the Vocational Research Coordinating Unit responsibility for the development of an evaluation system for postsecondary vocational education. A representative advisory committee has been appointed, a proposal to develop a program review system has been submitted to the Department of Education, and a tentative plan has been developed. This proposal, if approved, will provide resources for the development, testing, and revision of a model postsecondary evaluation system to be implemented. This plan, if implemented, will correct the problems identified in the postsecondary evaluation system by the National Center project staff.

Problem 7: Evaluation of services for special populations.

Explanation: How can the state evaluation system provide information to state and federal leaders as to how effectively the special needs of disadvantaged, handicapped, those with limited English speaking proficiency, minorities, women, and other groups are being met? Additional services should be considered as any activity designed to assist special groups to succeed in a regular vocational program.

Four major elements of this problem which evaluation, with the assistance of other units, should study are access, participation, process, and outcomes. Knowledge needs to be gained about the extent to which policy, social, and physical barriers have been eliminated. Evaluation must be aware of the special services provided to assist these individuals. How successful the special activities have been in reaching the outcome objectives set for all students must also be determined.

Results: During the current year of the technical assistance project, efforts have concentrated on helping states to improve their evaluation system for special populations. Through observation, interview, and analysis of documents, project staff members have identified specific problems which need action.

Alabama has responded to the statement of these problems and the accompanying recommendations by a total review of those sections of the evaluation system relating to special populations. Interview outcome guides which are used by evaluation team members now include a section on recruitment, entrance requirements, and removal of

barriers (physical, societial, attitudinal) for special populations. The information system is being modified to include information on the instructional setting in which education is provided. Interview outlines have also been revised so that teams will be encouraged to consider the quality of instruction, guidance, counseling, placement, and follow-up services for special populations. Attention is also given to the capacity and condition of facilities and equipment provided for special population individuals. The one weakness identified in the results section (longitudinal follow-up) has not, at this time, been corrected.

Problem 8: To clarify the relationship between self-evaluation, supervisory visits, and team visits in the evaluation scheme.

Explanation: These three separate activities have the potential for causing confusion or conflict within a program unless some guidelines are established. These guidelines should specify the role of each activity and outline arrangements for close coordination between and among them. Early observation by project staff and others indicated that findings during the self-evaluation, the supervisory visits, and the team visit could be quite different or even in conflict with each other. The idea of varied input into evaluation is to present different views of how programs should perform and how they can be improved. The advantages of these different views may be lost if local educators become confused or perceive different evaluators as giving opposing recommendations.

Results: It was determined by state staff in Alabama that it is essential to have broad involvement and input into the evaluation process. The danger of confusion and conflict was also recognized. The alternatives adopted were (1) establishing a mechanism whereby each succeeding evaluation effort (self-evaluation, supervisory review or team review) would receive the results of preceding evaluations, (2) providing arrangements for follow-up meetings between supervisors and local teachers, (3) having a staff member serve on each team, and (4) conducting orientation sessions by evaluation staff to clarify roles and expectations.

The state evaluation staff felt that this procedure would maintain the diversity of viewpoints without creating confusion. Observations indicate this is a partial solution to the problem; however, further clarification of the role and responsibility of each of the parties is needed.

Problem 9: To provide evaluation services with limited resources.

Explanation: A question uppermost in the minds of evaluation staff in Alabama, and in the other participating states as well, is the method to be used in providing evaluation services to the large school systems or to the large number of programs in the states. Some of the large city school systems in Alabama may have as many as 160 vocational teachers. This number is even greater in some other states. The prospect of putting together enough teams to review 160 programs with the resources available seems impossible. The law specifies that all programs must be evaluated over a five-year period of time.

Results: To meet the above problem, Alabama has made several adjustments in its evaluation system. The team evaluation limited to traditional vocational programs. Prevocational and career education programs not are included. The time the team spends in the larger schools has been extended by 1/2 day. The number of former students and employers interviewed has been reduced, and where possible additional team members have been included to a maximum of nineteen. The system was able to complete an evaluation of one vocational system in a large city last year.

Colorado

Colorado's supervisory staff is responsible for a portion of the evaluation scheme which consists of a checklist of strong and weak points of programs visited. Following the supervisory evaluation is a Comprehensive Program Review (CPR). This review is done by a team of individuals representing many segments of the society having an interest in vocational education. This team has the supervisory findings as background information before it begins its review. These form a basis for recommendations on program improvement.

Based for the most part on observation and discussions during several state visits, the project staff felt that Colorado has many of the essential parts of an effective evaluation system. The Management Information system (MIS) can provide required information in whatever form desired for the evaluation effort. There is an excellent working relationship between those responsible for the collection, storage, and retrieval of information and those charged with evaluation. The range, quality, and availability of data and the cooperation of the staff are strong contributors to an effective and efficient evaluation system.

Problems

The technical assistance team in conjunction with the state staff identified a number of problems in the Colorado evaluation system. These problems were presented to the state in a formal written report, in a meeting with evaluators and administrators, and informally, to individual members of the state staff. The problems presented for consideration and action by the vocational department were the following:

1. Measuring student achievement
2. Increasing LEA self-evaluation
3. Securing employer follow-up

   3A. Assuring confidentiality of employer follow-up

   3B. Securing continuing cooperation of employers
4. Using evaluation information and data in planning
5. Identifying schools/programs to evaluate
6. Systematizing all evaluation efforts
7. Determining effectiveness for special needs groups
8. Developing standards for program evaluation
9. Meeting requirements of mandated postsecondary evaluation
10. Increasing effectiveness of the supervisory review

While several of these problems were acted upon in a positive way, the state, in compliance with a legislative mandate, made extensive revisions in its total approach to evaluation. This restructuring of the evaluation system occurred simultaneously with (and as part of) a complete reorganization of the vocational department.

The legislature specified that the state vocational agency should first identify the least efficient and effective 20 percent of its programs, and secondly, concentrate its program improvement efforts on these programs which had the lowest performance score. It may be added parenthetically that the National Center project

team had for some time been urging that one or more states test this approach. Fortunately, Colorado had a data base which made it possible to compare programs on a number cost and outcome factors and to arrive at a logical list of those programs most in need of assistance.

In the Colorado model, efficiency is defined as local cost per full time equivalency student (FTE) as a percent of state cost per FTE for a particular program. Effectiveness is defined as the extent to which state goals are met by the local program. These goals expressed in terms of criteria are completion rate of enrollees, placement rate of completers, enrollment of minorities, enrollments of handicapped, enrollments of disadvantaged, and sex balance. Performance in the Colorado procedure means effectiveness in meeting goals relative to the resources expended on a comparative basis.

The first ranking of programs has been generated and distributed to schools. The response by schools to this procedure was reported to be very positive. The next step in the process will be to give the subject matter specialists (supervisors) a summary report on each of the low-performance programs. Supervisors consulting with the local program and school will report back to the state on the reasons the program ranked low and what the school proposes to do to improve the situation. Programs found to be in the bottom 20 percent a second year will have a state review to determine whether the program should be terminated or receive further assistance. This experiment should be watched closely and its progress reported to the evaluation community periodically.

Maine

The Maine vocational delivery system consists of twenty-five school systems providing vocational education. Each of fourteen of these are administered by a single high school with responsibility for serving all students in the district. The eleven additional schools are administered jointly by a number of schools in various regions. These centers, or regional vocational schools, are evaluated on a five-year cycle which includes an extensive self-evaluation and team review.

The project team visited the state several times to become acquainted with the evaluation system, to identify and discuss problems, and to review the present data system. The team observed a team review of one of the regional vocational schools.

The state choose not to continue with the technical assistance project in Year II. Since an alternative state was chosen, contact and follow-up on the solution of problems in Maine has been very limited. Following are the major problems identified and the efforts made to correct these problems during the first year of the project.

Problem 1: Alternative to Self-Evaluation-Team Accreditation.

Explanation: State staff and local educational personnel have expressed concern over the amount of time required for the self-study which precedes the team review. It is estimated that a school may spend as much as seven months in preparing the self-study report. While this was reported to be useful to the school, it was thought that a five-year cycle was too often to do this in-depth analysis. Having heard this comment from a number of schools, the state staff accepted this opinion.

In attempting to make the total evaluation effort as meaningful and productive as possible, the vocational department staff as well as the state advisory council staff have expressed an interest in exploring options to repeating the self evaluation-team cycle every five years.

Results: State staff are now considering using in-depth, teacher personel interview follow-up of former students and employers as the alternative system. This would gather

information in much greater depth than could be collected in an annual student follow-up.

Project staff were requested to propose procedures and sample questins to be used by teachers to interview former vocational students and employers. The system proposed by the project staff would train teachers in interview techniques, provide an interview guide for collecting information from former vocational students and employers, and suggest ways of reporting and using the information. The project staff proposal was reviewed by state staff and its adoption was recommended to the state board. This was the situation at the time of termination of the project.

Problem 2: Student Follow-up.

Explanation: The state conducted a test follow-up in three schools during the 1977-78 school year. This follow-up was conducted by sending follow-up forms to students from the state through the local schools. Forms were returned to the local school and then transported to the state office for computer analysis. Follow-up letters and phone calls were used to increase the response rate. Results of the analysis and the original forms were sent back to the local school. This process resulted in a 55 percent return rate from program completers. Former students were asked to give approval for the staff to contact employers for additional information. Eighty percent of the responding students answered positively to this request. Employers were then sent a questionnaire to ascertain their impressions of the level of training of the employees who had participated in vocational training. A 74 percent response rate was realized through the original mailing, a reminder letter, and a phone call.

Results: At this point, project staff reviewed results and procedures and made comments and recommendations. In the review of the follow-up instruments, several suggestions were made which were aimed at assuring more accurate analysis of responses. Some changes in procedures, as outlined below, were also suggested. As a general guide to revision and improvement of the evaluation system, the "Handbook of Follow-up of Vocational Students," developed by another project in the National Center's Evaluation Division, was used. Specific

suggestions were (1) reduce the responses allowed on questions where multiple responses might be confusing to the analysis, (2) change wording of some possible responses to make them correspond more closely to the questions, (3) divide some items where more than one question was asked, and (4) change some procedures to require less instrument handling. It was stressed by project staff that a special effort be made to check a sample of the non-respondents to see if they appear to be markedly different from those responding.

Newly adopted procedures include the mailing of questionnaires from a central location and the return of the completed form to a central location. Computer analysis will be completed, and the results and original instruments will be returned to the students' school. The letter accompanying the instruments will have the name of a local official of the school from which the student graduated.

Problem 3: More Effective Use of Evaluation Information

Explanation: The use made of the information generated is the real determinant of the benefits of an evaluation system. Evaluation data and information can make a contribution to the decisions made at both the state and local level.

This problem encompasses both the use to be made of the information and the form and procedures in which the evaluation findings may best be presented. Three questions relating to this overall problem were considered. First, how should the information be analyzed and packaged? Second, how should the information should be presented to schools? Third, how can this information be used as a basis for decisions?

Results: Question 1 - How should the information data be analyzed and packaged?

Presently follow-up data showing number and percent of students who answered in the several categories are provided to schools with no comparisons. The project staff recommended that in the coming year, the state consider the calculation of an outcome index. This involves reaching a consensus on desirable outcomes, assigning a weight to each outcome, and developing a

formula and computer program to do the calculation. This reduces all of the expected important outcomes to one figure and is a method of indicating the relative effectiveness of programs in achieving those outcomes considered to be important.

Results: Question 2 - How should the information be presented to schools?

The state will compile follow-up data from students and employers and provide this information to the schools and the visiting team. Teams will present major recommendations to the school at an exit interview and will provide a report to the school at a later date.

Results: Question 3 - How can the information be used as a basis for decisions?

Possible uses at the state include the following:

1. Basis for decisions relating to expansion, continuation, or termination of programs
2. Guide for efforts of subject matter specialist (supervisors) in assisting schools/programs to improve.
3. Guide to fund allocation for supplemental services.
4. Indicators of inservice and preservice education needs.
5. Indicators of impact on vocational education.
6. Indicators of effectiveness of services for special needs groups.

Possible uses at the local level include the following:

1. Indicator of changes needed in school and program.
2. Indicator of impact of vocational education.
3. Guide to fund allocation.
4. Indicator of programs needing special assistance.
5. Indicator of effectiveness in meeting needs of special needs and individuals.

Obviously, both local and state decision makers should be using the results of evaluations as an input into managing the vocational education program. Too often these results are not used partially because the manager is not aware of the potential benefits of this procedure and partially because

evaluation findings are not packaged in the most usable form. Project staff have not been able to determine if there has been any increase in the use of evaluation information.

Problem 4: Evaluation of State Vocational Delivery System.

Explanation: All states are engaged in some type of evaluation of local programs. This consists mainly of answering the question "Are we doing things right?" Few states are concentrating on evaluation of the state program of vocational education and attempting to determine "Are we doing the right things?" The accountability report specified by the Congress at least to some extent asks this same question of the states.

To evaluate effectively a state must ask itself the hard questions:

- To what extent are we meeting the manpower needs of the state?
- Are programs accessible and open to all who could profit from training?
- Are we providing training for the most critically needed occupations?
- Are we providing training in which there is adequate for training and expectations of advancement?
- Are there opportunities for retraining of employment for every student enrolled in vocational training?

These and many other questions could make up the score sheet against which the state program could be judged.

Results: At present, the accountability report will be used to evaluate the state's program. It was recommended by the project staff that Maine consider the formation of a consortium of states including vocational staff and SACVE members to perform an evaluation of the state vocational system.

Problem 5: Follow-through on recommendations of self-study and evaluation team.

Explanation: Probably the most important function of an effective evaluation team is not to evaluate but to make recommendations for improvement. Schools need assistance not only in identifyibg problems, but in solving them. A follow-through system on evaulation recommendations is essential if maximum benefit is to be realized from evaluation.

This follow-through consists of several important phases. First, the state should be in a position to provide assistance in implementing recommendations. Second, the state should require that critical program improvements be made if programs are to continue. Third, there should be feedback to the evaluation unit on how recommendations were dealt with. It is important that local and state staff clearly understand who has what responsibility in this effort to help schools and programs provide better vocational education.

Results: Maine is placing major responsibility for assistance with the supervisory staff and including reports on improvements in the state plan.

Two additional actions were recommended to support program development. First, as state summaries of evaluation are made, a compilation of recommendations will show the improvements that are most commonly needed. The state could then allocate resources (dollars, staff, etc.) to the solutions of these most common problems. Second, the vocational teacher education staff should be made aware of deficiencies identified in schools so that preservice and inservice programs could stress these points.

Problem 6: Identification of outcomes (other than placement) for which vocational education should accept responsibility and take credit.

Explanation: Occupational placement has always been an important objective of vocational education. This will continue to be important both as a measure of effectiveness and as a guide for updating and improving programs. There are, however, other outcomes of vocational education. Programs and schools should be aware of these other results and attempt to increase the benefits that students receive. Vocational educators should also strive to identify ways of measuring

other outcomes as an aid in evaluation and as a credit to programs.

This problem was especially important to the executive secretary of the State Advisory Council for Vocational Education. The position was that vocational education, especially at the secondary level, should not get trapped in considering the only worthwhile outcome to be placement on a job.

Results: No action has been taken at this time, but recommendations are under consideration. The project staff have recommended that input from the National Center project "Examining Vocational Education Outcomes" be obtained before other action is taken. Interest has been expressed in the possibility of calculating a product index for each program. This product index would give weight to other outcomes in addition to placement.

Problem 7: Determining effectiveness of practices and programs for special subpopulations (disadvantaged, handicapped, minorities, limited English proficient, and women).

Explanation: There are some aspects of the problem in Maine which may influence the choice of solutions.

1. Many of the evaluation team visits will be done under the auspicies of the New England Association of Schools and Colleges. The interjection of appropriate qustions into the review guides may pose more of a problem than a state conducted evaluation.

2. The types of special needs, the special services rendered, and the attitudes of the school and community may be quite different in different sections of the state.

Results: Efforts have been made to insure the state's ability to identify individuals falling within these special categories in enrollment and follow-up procedures.

Problem 8: Coordination of evaluation with accreditation by the New England Association of Schools and Colleges.

Explanation: A cooperative agreement has been worked out whereby the local school will use the program review ("P" form) developed by the state for self-study prior to its review by a team selected by and representing the New England Association.

Project staff had an opportunity to observe one of these visiting teams reviewing an area vocational school. Two problems were identified with this arrangement. First, team members and the Association seemed very reluctant to have other individuals observe or participate in the process. These "other" individuals were representatives of the State Vocational Department, members of the State Board for Vocational Education, and State Advisory Council personnel. Second, team members seemed unable to recognize as acceptable any arrangements for service to students with which they were familiar. Since this was the first of several planned team visits to several schools, it is hoped that the Association can encourage more flexibility in its team members.

The state is continuing to negotiate with representatives of the New England Association on modifications they feel should be made. Progress is reported in defining the role and responsibility of the ex officio members the state feels should be involved in the review teams.

Maine is a relatively small state with limited staff to perform functions of the vocational department including evaluation. Problems for which immediate solutions are being worked out are the implementation of a follow-up of students and employers and coordination of evaluation with the New England Association of Schools and Colleges. The installation of the alternative five-year evaluation system and solution of other problems identified in the report are long range objectives of the department.

California

The secondary evaluation system in California is responsible for (1) describing the status of the program delivery system and (2) providing information on sources of support or information on problems. This description of status could lead to the setting of some state priorities for assistance to programs. The focus of evaluation in the California Community College system is on effectiveness of the local community college delivery system. In the past the state has provided incentive projects for addressing major needs identified by the evaluation system.

Problem 1: Collection of data in the most efficient manner.

Explanation: Both the secondary and postsecondary evaluation systems have responsibility for collecting and analyzing follow-up data and information on vocational completers and leavers and employer follow-up. The amount of data involved in this process in California makes it imperative that the most efficient methods be used to collect and analyze information.

Central to efficiency in data collection is a clear specification of what data are essential to effective evaluation. At this point in time the Vocational Education Data Systems (VEDS) is attempting to identify critical data elements; however, there still appear to be some problems with VEDS, particularly at the postsecondary level. The Office of Civil Rights (OCR) guidelines are also requiring data and information from the states.

If at some time in the future the state could identify the outcomes expected of vocational education and initiate a system of measuring outcome objectives, a guide to data needs would be provided. Individuals representative of all affected institutions should be involved in specifying the outcomes to be required and the data necessary to determine the extent of achievement of each objective.

Results: Secondary vocational education has developed a procedure for Follow-up of Students and Employers (FUSE). This system, as originally proposed, would provide guidelines to the local institutions on how to collect and report the necessary

information. This plan is now being revised to minimize the data burden on the local school. Study is continuing on how the necessary data may be obtained with a minimum input of resources.

Postsecondary vocational education in California developed the Student Accountability Model (SAM). This cooperative effort among community colleges, in conjunction with the Community College Occuational Programs Evaluation System (COPES), should provide the data and information necessary for evaluation in as economical a manner as possible.

Problem 2: Targeting the evaluation system.

Explanation: A question asked in connection with increasing the efficiency of the evaluation is "Are we targeting on the right audience? Are we asking the right people the right questions?" Evaluation information must be able to describe the services and determine program effectiveness for a specific set of individuals and identify ways programs need to change in order to increase effectiveness. This set of individuals may be all students participating in a program or some special group. Program description and effectiveness for regular students may carry with it a different set of questions than those concerns about program description and quality for special needs populations. It is incumbent upon evaluators to be able to specify the target client and the means of determining services and effectiveness for the various groups vocational education is responsible for serving. States face the choice of either one evaluation system for special as well as regular students or separate systems.

Results: The decision has been made to target one evaluation effort at all groups to be served by programs. Thus, one evaluation will describe both regular students and special needs students being served and services provided.

The National Center project staff provide an analysis of the ability of both the secondary and postsecondary systems to provide the data and information needed to evaluate for special populations. This analysis identified ways in which the existing system should be modified to ensure an evaluation which was truly reflective of program effectiveness for all students.

The secondary evaluation coordinator submitted a vocational education executive staff issue memo to the administrative staff of the vocational education department. This memo discussed each of the problems identified by the project staff, suggested action alternatives, and recommended a solution. The executive staff, in turn, accepted the report and approved of the recommended actions. This action demonstrates the department's support and determination to improve programs and services for special populations.

The postsecondary evaluation system in the form of COPES and SAM was reviewed by the project staff and needed changes were pointed out in a written report and in person with the evaluation coordinator. This information was considered in the revision of the procedures and instruments to ensure that the evaluation system is targeted to all of the clients which the occupational community college system is serving. A longitudinal follow-up of community college students developed and presently being tested in the state shows great potential for expanding the data available for evaluation and can provide valuable guidelines to other states considering following program completers for an extended period of time.

Problem 3: Determining the effectiveness of the evaluation system.

Explanation: Administrators and evaluators at both the secondary and postsecondary levels have requested an assessment of their evaluation system. Those persons on state staff have expressed a desire to have the National Center project staff do a critique and evaluation of their system. Information has been requested on (1) the extent to which the present system meets the federal requirements, (2) the extent to which the present system is meeting state and local needs for program improvement, and (3) recommendations for improvement.

Those in administration and those in evaluation seem genuinely interested in improving the evaluation system, and the request for an assessment appears to stem from that interest in improvement. Administrators are understandably anxious about compliance while evaluators naturally are concerned with the complexities of making their plans operational.

Results: No decision has been made on a method for evaluating the evaluation system. National Center project

staff recommend that evaluation by users be considered. A survey of these user groups could provide a checklist of expectations against which to judge evaluation efforts. Project staff in conference with administrators of state education agencies identified the following items as being important in evaluation:

1. Evaluation should be based on other benefits of vocational education in addition to placement.

2. The evaluation should go beyond compliance and look at state needs.

3. Evaluation should identify those programs that need help and suggest ways they can improve.

4. The state should develop a solid data system.

5. The data along with evaluation should be used as a basis for allocation of funds.

6. Evaluation should provide evidence that dollars spent in vocational education produced more payoff than dollars spent elsewhere. Payoff in terms of training for jobs and making people employable should be reported.

7. Evaluation should provide solid evidence that vocational education makes a difference in jobs, pay, and upward mobility.

8. Evaluation should provide evidence to use in eliminating or redirecting programs.

9. Evaluation should describe program results in terms of placement.

10. Evaluation should determine competencies achieved by students.

11. Evaluation should determine how well teachers are doing in terms of student reaction, updating of course materials, contact with industry and what students do with training.

While these expectations are certainly challenging, and perhaps in some instances unrealistic, with the requirements of

the other users added, this could provide the idealistic yardstick against which to measure the evaluation system.

During the second year of the technical assistance project an assessment of the state's ability to evaluate its services and programs for special populations has been done. This could be viewed as an evaluation of the evaluation system as it relates to that segment of the programs offered.

Problem 4: Coordination between secondary and postsecondary evaluation system.

Explanation: In assuring efficiency and effectiveness of the evaluation system, it is essential that there is close coordination between the secondary and postsecondary work. Many will agree with this assertion; however, the difficulty comes when practical implementation of this concept is attempted. An important point to keep in mind is that systems and organizational units do not coordinate and cooperate--people do. If good working relationships are established, it is because people have made the effort and adjustments necessary in any such situation. As a minimum requirement, the data elements and definitions should be comparable, and effectiveness of programs should be mutually defined.

Results: California is an excellent example of a highly effective cooperative effort between the evaluation systems serving these two levels of vocational education. Given that fact that each level has its own unique needs and expectations the two systems are compatable and comparable in all possible aspects. Based on observation, the project team considers this an outstanding example of coordination and cooperation and exchange of information and ideas between individuals responsible for evaluation at the secondary and postsecondary levels in California.

Problem 5: How to do employer follow-up.

Explanation: It is important for teachers and decision makers at state and local levels to know how employers view the adequacy of training of recent vocational program completers. This, along with a number of inputs, provides valuable information on how well programs are reaching student outcome

objectives and on changes which need to be made in programs.

This information may be difficult to get. Employers may feel that this is an infringement on their time and refuse to respond. There may be concerns about the confidentiality of this information in the minds of employers. In larger businesses, the inquiry may go to a person who has no knowledge of this employee. The collection of adequate, reliable data could be very expensive.

In spite of these difficulties, it is important that ways to gather this information be explored. First, the Education Amendments of 1976 mandate that employer reaction to training be used in evaluating programs. Second, this information is valuable in bringing about program improvement. Third, this information can be used to convince others of the value of vocational education. Fourth, this survey can be a factor in strengthening relationships between vocational education and the business community.

Results: The FUSE system designated to provide follow-up data from secondary students and employers was discussed earlier in this chapter. The major discussion point seems to be whether the state or the local district will assume major responsibility in actually collecting the data. Once this question is resolved, the planned procedures should be adequate to obtain the needed information.

The community college vocational evaluation staff have expressed some serious questions about the validity and usefulness of employer follow-up information collected in the way VEDS proposes. Before initiating an employer follow-up, the system is waiting until more definitive information is provided by VEDS.

Problem 6: Securing commitment of administration, field staff, and local schools to evaluation.

Explanation: Administration and the field staff appear to be committed to evaluation. They still have some questions as to whether the present system is the one which is best for the state. Local schools will have reservations about any activity which requires their time until they are convinced of the benefit to their own school or program. The problem then seems to be one of demonstrating to several interested parties that

this evaluation system will meet their expectations.

Results: California provides an example of the fact that priorities must be set when there is an abrupt decrease in resources. Evaluation planning at both the secondary and postsecondary levels is attempting to reduce its data requirements to what is absolutely essential to meet state needs and legislative mandates. Advisory committees are used extensively to review plans and to gain support. National Center project staff have attempted to recommend only what is critical to having an effective evaluation. These recommendations translated by state evaluators, have resulted in a positive response from those responsible for administration of vocational education.

CHAPTER VI

STATES' ABILITY TO EVALUATE PROGRAMS AND SERVICES FOR SPECIAL POPULATIONS: STRENGTHS AND WEAKNESSES

This chapter presents the states' strengths and weaknesses with regard to their ability to evaluate programs and services for special populations. Ability to evaluate was examined under four areas: (1) determining program accessibility, (2) determining participation, (3) identifying services, and (4) measuring program outcomes.

Alabama

Determining Program Accessibility

At the secondary level, information on vocational program accessibility for special populations was gathered by the Instructional Program Review Instrument (IPRI), Form M_2 (Monitoring Checklist), and Interview Outlines. The relevant data that were addressed by the different instruments were as follows:

a. The IPRI dealt mainly with program accessibility in relation to gender, i.e., equal access for both male and female students and architectural barriers for the handicapped.

b. Form M_2--a monitoring checklist used by the Division of Instruction, Program for Exceptional Children and Youth--contained some items on program accessibility for exceptional children as it related to facility.

c. The Interview Outlines that were being used by the Team Review contained very general questions regarding the determination of program accessibility.

The discussion above shows that the determination of program accessibility for secondary vocational programs was generally limited -- access in terms of gender and physical barriers for the handicapped. The secondary state vocational evaluation system was not gathering data and information with regard to the following: recruitment procedures employed at the school level, local entrance

requirements and local efforts to remove attitudinal and societal barriers.

In addition to the foregoing limitations, there were questions relative to the validity and reliability of the evaluation instruments being used, particularly the interview outlines. First, criteria for rating programs were nonexistent. Second, key words and phrases which can have to multiple interpretations were not operationally defined.

Determining Participation

Participation of special populations was determined through data collected by the MIS. All vocational schools were required to furnish the following enrollment data:

a. Student's name
b. USOE code
c. Grade level
d. Sex
e. Ethnic origin
f. Disadvantaged
g. Handicapped

Alabama lacked required VEDS data on students with limited English proficiency (LEP) and enrollment by instructional settings.

Identifying Services for Special Populations

Information on the services for special populations was gathered through the IPRI and interview outlines. The data collected included the following:

a. In the IPRI, the data pertained to identification of services for the handicapped and sex fairness/stereotyping.

b. In the interview outlines, the data focused on the handicapped, disadvantaged, and women.

The secondary evaluation system did not investigate the following elements in the process of identifying services for special populations: quality of instructional offerings, guidance and counseling, placement and follow-up services, capacity and condition of facilities, and for special populations.

Measuring Program Outcomes

The MIS collected information on completers by asking every institution to complete DHEW OE Form 346-4 (Placement of Program Completers in Vocational Education Programs). The form did not contain data and information on student outcomes as required by VEDS. However, it was possible to cross-tabulate the information on completions with the enrollment data. Alabama, therefore, could comply with the VEDS requirements if proper computer programming was used but there was no evidence that this type of capability existed at the time of this study.

Alabama did not have the ability to meet other requirements of the Education Amendments of 1976, i.e., to determine employer satisfaction and to measure student achievement with standard occupational proficiency measures, criterion referenced tests, and other examinations.

California

Secondary Vocational Education Evaluation

Determining program accessibility. Information on program accessibility for special populations was gathered through the Program Administrative Review (PAR) and the Program Assessment-Vocational Education (PAVE). The specific information collected by California was as follows:

a. In the PAR instrument, the data focused on documentation of program barriers for the handicapped and disadvantaged groups.

b. The teacher interview schedules in PAVE examined mainly "special efforts to encourage special populations to enroll" and prerequisites for enrollment. The same was true of the student questionnaire.

c. The PAVE Program Self-Assessment Questionnaire limited was concerned with equal access as it relates to gender.

The ability of the secondary vocational evaluation system to determine program accessibility was limited to the issues cited above and certain special population subgroups. It failed to deal with all the special population subgroups, particularly the minorities and limited English proficiency (LEP). Further, it did not collect data or information on local school efforts to remove attitudinal and societal barriers.

Determining participation. In the secondary vocational education system, determining participation of special populations was made through the Management Information System (Forms VEA-48 Sections I and II), PAR, and PAVE. The MIS gathered the following data on students:

a. Ethnic classification
b. Grade level
c. Sex
d. Limited English speaking
e. Disadvantaged
f. Handicapped
g. USOE program code

The MIS forms enabled California to determine participation according to sex designation and ethnic classification in the USOE six-digit and two-digit codes. The MIS forms did not allow the state to determine enrollment on types of handicapped, disadvantaged, and instructional settings as required by VEDS starting with 1979-80. Further, the MIS did not allow the state to determine participation of limited English proficiency students in the USOE six-digit and two-digit codes.

Identifying services for special populations. California collected limited information regarding the identification of services for special populations through PAVE and PAR. In PAR, questions on process elements were mainly for the disadvantaged and handicapped. In PAVE, questions on process evaluation were general in nature. On the other hand, the questions on appropriateness of instructional materials were limited to the handicapped and disadvantaged.

The foregoing discussion shows that the California secondary evaluation system failed to treat the identification of services across all special population subgroups, especially minorities and limited English proficiency students.

Measuring program outcomes. At the time of this study, California was collecting data on program completers and leavers which satisfied the requirements of DHEW OE Form 346-4 but not VEDS requirements. The Follow-up of Students and Employers (FUSE) which sought to fulfill the VEDS requirements (among other things) was still in the planning. Measuring student achievement also was still in the planning stage.

Postsecondary Vocational Education Evaluation

Determining program accessibility. The California Postsecondary Evaluation System determined program accessibility through its Community College Occupational Programs Evaluation System (COPES). In COPES, the data gathered were limited to:

a. Efforts to achieve sex equity in program enrollment, recruitment, and admission policies.

b. Architectural barriers for the handicapped.

The activities of item (a) should have been addressed to all special population subgroups, i.e., women, handicapped, disadvantaged, limited English proficiency, and minorities. Further, COPES failed to evaluate local school efforts to remove attitudinal and societal barriers.

Determining participation. The determination of participation of special populations has been made through the Student Accountablity Model (SAM). The data gathered from the forms--especially the Student/Course Inventory form--indicate that the California postsecondary vocational evaluation system can gather important information not only for compliance purposes but also for planning and program improvement. At the time of the study, however, enrollment of the various categories of special populations was determined by the USOE two-digit codes in view of the unresolved technical difficulty associated with the USOE six-digit code at the postsecondary level--a problem recognized by VEDS. Further, no data on handicapped enrollment by instructional settings were collected.

Identifying services. COPES can gather adequate information on the identification of additional services for special populations. However, in the student questionnaire, identification of respondents was limited to college name and course title. A definite sampling plan was not adopted to determine the special population respondents. Additionally, it was difficult to isolate the responses of the special populations from the responses of all other student respondents. The sampling procedure recommended by COPES used course classification.

Measuring program outcomes. SAM offered a system of examining student outcomes for both regular and special students not only for compliance purposes for also for planning. It made it possible to compare and contrast regular and special students in terms of program completions, successful placement, and continuing education in different program areas (although there was no evidence that data were being collected in this way). At the time of the study, SAM did not include data on continuing education over time. The postsecondary vocational system, like the secondary, also did not have the ability to measure student achievement as mandated by the Education Amendments of 1976.

Colorado

Determining Program Accessibility

Through the Comprehensive Program Review (CPR), Supervisory Visitation, and Institutional Application Plan (VE-120), Colorado was able to collect some information on program accessibility. The specific information was as follows:

a. In the CPR and Self Review instruments, questions on accessibility were limited to the determination of physical barriers for the handicapped. The same was true for the Supervisory Checklists. However, not all checklists contained questions on physical accessibility.

b. VE-120 examined recruitment and selection of students in terms of sex equity.

Determining Participation

The Colorado Management Information System (MIS) gathered data on student enrollment using form VE-135 (Student Accountability Data Tool). Effective last school year (1978-79), MIS was collecting data on special populations according to VEDS requirements except data enrollment by instructional settings.

Identifying Services

Through the CPR and supervisory visitation, the information on the quality of instructional offerings and condition of facilities and equipment used was limited to regular students only. Information was confined to the following:

a. In the self-review instruments, focus was on the disadvantaged and handicapped. The quality indicators were concerned with the mechanics of compliance rather than the assessment of quality of additional services as they affect quality of products.

b. Some supervisory checklists contained questions on special services. Questions were mainly concerned with the assessment of tutorial services and the use of instructional (bias-free) materials.

The "Guidelines for the Use of Disadvantaged/Handicapped Services" (VE-116) contained a program review checklist for supplemental services. However, there were questions on the validity and reliability of the instrument. The checklist lacked criteria for rating services. Furthermore, its rating scale was not operationally defined.

There are, therefore, serious deficiencies in the identification of special services for special populations in the following areas: quality of instructional offerings, guidance and counseling, placement and follow-up services, capacity and condition of facilities, equipment used, and other services. Further, Colorado failed to perform process evaluation across all special population subgroups.

Measuring Program Outcomes

The MIS, through its Student Accountability Data Tool, collected information on all categories of special population completers and leavers (USOE 6-digit code) at the institutional level. However, the following limitations in meeting VEDS requirements were found:

a. Although VE-135 collected data on all special population subgroups, it did not publish follow-up data on the different subgroups.

b. Its follow-up study did not include employer satisfaction.

At the time of the study, Colorado also did not have the ability to measure student performance or achievement.

Connecticut

Determining Program Accessibilty

The Vocational Evaluation System of Connecticut determined program accessibility for special populations through the Self-Evaluation Instrument. Data gathered on accessibility included the following:

a. Whether sex stereotyping was eliminated in program publicity

b. Whether publicity was directed to "encourage minority and handicapped students to enroll in all vocational areas"

c. Whether facilities were easily assessible to the handicapped

d. Whether there was an "action plan in effect to overcome sex stereotyping in recruitment"

e. Whether vocational education programs were comprehensive and not limited to single courses

The data collected were limited to certain special population subgroups. Items a, b, and d should have been directed to all special population subgroups. Further, evaluation of local school efforts to remove attitudinal and societal barriers was not included.

Determining Participation

The series of research reports on enrollment issued by the Bureau of Vocational Program Planning and Development satisfied all of the VEDS requirements except the following:

a. Handicapped enrollment by instructional settings

b. Categories of disadvantaged enrollment

c. Categories of handicapped enrollment

d. Limited English-proficiency enrollment

On the other hand, the project staff was informed by the bureau that the Department of Education Data System collected data by handicapping condition, sex, race, and predominating language. The department could determine only participation of handicapped in vocational programs in the USOE six-digit and two-digit codes.

Identifying Services

Process evaluation was accomplished by using a self-evaluation instrument. These were the major limitations with regard to the identification services for special populations:

a. Concern for facilities and equipment was limited to the issue of accessibility for the handicapped.

b. There were no specific question regarding the determination of quality of counseling, placement, and follow-up services for special populations.

c. Concern for curriculum was limited to the review of curriculum materials to overcome sex bias.

Measuring Program Outcomes

Data and reports on student follow-up were collected and published by the Bureau of Vocational Program Planning and Development. The most recent published reports (1978-79) showed that the bureau had the capacity and ability to meet all VEDS requirements except the following:

1. Follow-up of vocational graduates by racial/ethnic, sex and handicapped

2. Determination of employer satisfaction with special population vocational completers and leavers

At the time of the study, the state did not have a program to measure student achievement.

CHAPTER VII

TECHNICAL ASSISTANCE PROVIDED TO STATES

This chapter presents a summary of the major strengths and weaknesses in the ability of the four cooperating states to evaluate programs and services for special populations, the recommendations made by the project staff, and the action and decisions made by the states in response to these recommendations. This chapter also discusses the additional technical assistance provided to help the states implement chosen solutions to identified problems. An end-of-the-year profile is presented to show the progress each state has achieved during the year.

Alabama

Summary and Recommendations

Examination of the instruments used and information available in Alabama regarding the evaluation of programs and services for special populations reveals a number of limitations, especially in its ability to generate data for compliance and planning requirements. These are summarized as follows:

1. Alabama's ability to determine program accessibility was generally limited to data regarding equal access for male and female students as well as determination of physical barriers for the handicapped. The state was not aware of recruitment procedures employed at the local school level, the local entrance requirements, and the state's own progress in removing attitudinal and societal barriers. In view of the foregoing, the state fell short in its ability to comply with federal regulations thatrequire states to report periodically to the Office of Civil Rights on the accessibility of their vocational programs.

   Recommendations Made: The items in the Instructional Program Review Instrument, interview outlines, and Standard of Policies should be reexamined in relation

to the requirements of the Education Amendments of 1976 and the Civil Rights Act of 1964. These instruments and documents should be modified to incorporate not only legislative requirements but also data needed for planning. Alabama should gather data on program accessibility across all special population subgroups and prepare a report on the subject for the Office of Civil Rights.

2. Through the MIS, Alabama had the ability to generate data on enrollment for the different special populations categories of as required by VEDS except for enrollment of handicapped instructional settings and enrollment of persons with limited English proficiency (LEP).

   Recommendations Made: Alabama needs to modify the MIS enrollment and follow-up forms to incorporate VEDS requirements.

3. The ability of the state to perform process evaluation of programs and services for special populations was limited to instructional fairness in terms of gender and determination of additional services for handicapped, disadvantaged, and women to the exclusion of LEP. Alabama's vocational education evaluation system did not investigate the following process elements: quality of instructional offerings for special populations, guidance and counseling for special populations, placement and follow-up services for special populations, capacity and condition of facilities and equipment for special populations, and other services for special populations. In view of these limitations, Alabama was unable to provide the information required by the Education Amendments of 1976.

   Recommendations Made: The Instructional Program Review Instrument (IPRI) should be modified to enable the state to perform process evaluation across all special population subgroups. Further, special attention should be given to those process elements which were not included in the IPRI as noted in 3.

4. Alabama did not have the ability to determine program outcomes as required by the Education Amendment of 1976 which mandated that states measure student achievement using standard proficiency measures such

as criterion-referenced tests. Furthermore, the follow-up system did not meet VEDS data requirements.

Recommendations Made: Plans should be developed, tested, and implemented on the determination of student outcomes, especially the mandated federal requirements. It is also suggested that Alabama prepare a separate annual report on the evaluation of special population enrollment in vocational education reflecting federal legislative and planning requirements. Further, an annual report should be prepared and submitted to the Office of Civil Rights to substantiate the state's effort to eliminate discriminatory practices in vocational education.

General Recommendations Made

In addition to evaluation requirements mandated by federal legislation, there are some recommendations which relate to the total evaluation system which should be implemented if maximum impact and efficacy is to be achieved by the system for both regular and special students.

1. The total evaluation procedure should be formed into a unified system. This does not necessarily mean reorganization. It does mean that clear lines of responsibility and authority should be estabished within the system. The data needed, the time, and form in which these will be provided; the relationship between the area specialist review and the team review; the use which is to be made of the findings are all matters which should be carefully and clearly defined. It is essential that the individual responsible for directing evaluation activities have the authority to operate the system effectively.

2. It is further recommended that the total process of needs assessment, planning, and evaluation be described in detail. This will assist the state in establishing the relationship between quality, dollars, and future planning.

3. An evaluation system for postsecondary vocational education should be designed, tested, and implemented. At the time of this study, there

was no well-defined vocational evaluation system for postsecondary vocational education.

4. The goal of assuring vocational education to any citizen who desires it should be accepted by the state, and a well-defined plan for making occupational training accessible to all should be designed.

5. Comparative data about programs needs to be gathered and provided to schools and evaluation teams. Information on enrollment (regular and special students) and follow-up along with other data elements, such as dollars invested, staff education and experience, facilities and equipment, and quality should be available on each program to be evaluated. If this data can be presented in a comparable mode and with similar program averages it will be more meaningful and usable.

Technical Assistance Provided and Results

First Quarter (February and March only)

- Finalized memorandum of understanding between Alabama and the National Center regarding technical assistance on evaluation for Year II.

Second Quarter

- Analyzed Alabama's ability to evaluate programs and services for special populations. Activities included
  - collecting and analyzing pertinent data and documents from the state;
  - interviewing state officials concerned with the evaluation of special populations enrolled in vocational programs.
- Preliminary analysis report was made and sent to Alabama for reaction. The state was also furnished copies of the "Evaluation Matrix" and the summary of pertinent legislation developed by the technical assistance staff.
- In the second week of June, a visit was made to Alabama to discuss the basis/criteria of the analysis study with emphasis on legislative requirements, the results of the analysis, and the state's reaction.

Third Quarter

- The report was finalized. This included clarifying those parts on question and making specific recommendations to solve identified problems.

- On the third week of July, a visit was made to discuss specific recommendations for improvement and to help the state get started in terms of implementing the recommendations. Specific weaknesses of the "Standards and Policies" and the evaluation instrument were discussed by the consultant with the Research and Coordinating Unit (RCU) staff. Suggested solutions/strategies were also made. The RCU staff promised to study further mandated evaluation requirements and the "Evaluation Matrix." They agreed to revise their "Standards and Policies" and develop new evaluation instruments that would reflect legislative requirements and the elements of an effective evaluation system.

Fourth Quarter

- In the third week of October, a visit was made to review accomplishments and help resolve some major problems.

- Evaluation instruments were revised based on recommendations of the project staff.

- "Standards and Policies for Quality Programs in Secondary Schools" was revised to include both planning and legislative requirements. This will be submitted to the Alabama State Board for Vocational Education this spring for approval.

- Report on enrollment and program completion forms were revised to include all the VEDS data requirements.

- Plan for longitudinal follow-up study of special population program completers and leavers is being developed.

- State-wide testing of student achievement is under study.

Information Collected	Start of Technical Assistance April 1979	Actions Taken April - December 1979	Status December 30, 1979
1. Program Accessibility			
1.1 Facility factors	- Limited to physical barriers for the handicapped	- Instrument revised to include all facility factors	- Complete
1.2 Educational factors	- Limited to sex designations	- Instrument revised to include all educational factors	- Complete
1.3 Societal factors	- None	- Annual application reg. revised	- Complete
2. Participation			
2.1 Enrollment (VEDS classification) USOE 2-digit code	- Complete except LEP and instructional settings	- Enrollment forms were revised to include all VEDS requirements	- Complete
2.2 Enrollment (VEDS classification) USOE 6-digit code	- Complete except LEP and instructional settings		- Complete
3. Process			
3.1 Quality of instructional offerings	- None		- Complete
3.2 Capacity condition of facilities & equipment	- None	Evaluation instruments were revised to enable the state to evaluate 3.1 to 3.4.	- Complet
3.3 Guidance & counseling	- None		- Complete
3.4 Placement & follow-up services	- None		- Complete
4. Outcomes			
4.1 Student Achievement	- None	- Under study	- Under study
4.2 Successful program completers	- Limited	- Report of program completion forms were revised	- Complete
4.3 Succesful placement	- Limited	- Longitudinal follow-up study of special populations is being planned to meet 4.3 & 4.4	- Under study
4.4 Successful employment over time	- None		- Under study

Figure 12. An end-of-the-year profile of the Alabama secondary vocational education evaluation system.

California

Secondary. The California Secondary Vocational Evaluation System with its PAR, PAVE, FUSE, and MIS components had the following strengths and weaknesses with regard to its ability to evaluate programs and services for special populations:

1. California's ability to determine program accessibility was limited to documentation of program barriers for the handicapped and the disadvantaged, efforts to encourage special populations to enroll including prerequisites for enrollment, and equal access to programs for both male and female students.

   Recommendations Made: Program accessibility should be determined across all special population subgroups. This will require modifications in the PAVE instruments. Further, a decision regarding which instrument to use to collect data showing local school efforts to remove attitudinal and societal barriers needs to be made. An annual report on program accessibility highlighting the state's effort to remove various discriminatory practices should be prepared and submitted to the Office of Civil Rights.

2. California had the ability to determine participation according to sex designation and ethnic classification at both the USOE six-digit and two-digit codes. However, the state did not have the ability to meet the following VEDS data requirements: enrollment as to categories of handicapped and their instructional settings and categories of disadvantaged. Further, the state did not collect data about limited English proficiency students either at the USOE two-digit and six-digit codes.

   Recommendations Made: The MIS VEA Form 48 should be modified to make it possible for California to gather all the data required by VEDS.

3. California's ability to perform process evaluation focused mainly on the disadvantaged and the handicappped.

Recommendations Made: Process evaluation should be expanded to all special population subgroups in order to include women, minorities, and limited English proficiency students. To accomplish this, it is suggested that the PAVE instruments be modified.

4. California's ability to measure outcomes did not meet the requirements of VEDS and the Education Amendments of 1976 although the state was considering some plans to this effect.

Recommendations Made: The requirments of VEDS and the Education Amendment of 1976 in terms of measuring student achievement should be carefully studied and incorporated into the plans being developed. Due consideration to the state's prevailing fiscal and social constraints sould be given.

Technical Assistance Provided and Results

First Quarter (February and March only)

- Finalized memorandum of understanding between the California Vocational Evaluation Division and the National Center regarding the technical assistance project on Year II.

Second Quarter

- Analyzed the state's ability to evaluate programs and services for special populations. Activities included
  - collecting and analyzing pertinent data and documents from the state;
  - interviewing state officials concerned with the evaluation of special populations enrolled in vocational programs.
- Prepared preliminary report and sent to the state in the second week of May. The state was also furnished with copies of the "Evaluation Matrix" and the summary of pertinent legislation developed by the technical assistance staff.
- State replied asking further clarifications on certain aspects of the report.

Third Quarter

- A report was prepared which included clarifiying those parts in question and making specific recommendations to solve identified problems.

- A visit was made by the project director in the second week of July to discuss with the secondary vocational education evaluation officials the basis/criteria of the analysis study with emphasis on legislative requirements, results of the analysis, and specific recommendations to deal with the identified problems.

- On August 1, 1979 the secondary vocational evaluation consultant prepared a memo to the California Vocational Education Executive Staff (VEES) concerning the result of the National Center study. He also informed the VEES of the specific alternatives he thought were most appropriate in solving identified problems. Previous to this memo, however, the evaluation consultant discussed the analysis report with his own staff and field personnel concerned with vocational evaluation. Their opinions formed the basis of a portion of the consultants memo.

Fourth Quarter

- A visit was made by the project director during the first week of October to attend the Follow-up of Student and Employers (FUSE) advisory meetings and assess the accomplishments of California with the evaluation consultant.

- Evaluation of the PAVE and PAR instruments were revised on the basis of recommendations of the technical assistance staff regarding determination of program accessibility. California's VEES approved all the recommendations of the secondary vocational education consultant. Among efforts to implement approved recommendations, a state financed and supervised testing service (for districts wishing to participate) was started to measure special student achievement.

Information Collected	Start of Technical Assistance April 1979	Actions Taken April - December 1979	Status December 30, 1979
1. Program Accessibility			
1.1 Facility factors	- Limited	Revised evaluation instruments to include 1.3 to 1.3.	- Complete
1.2 Educational factors	- Limited		- Complete
1.3 Societal factors	- Limited		- Complete
2. Participation			
2.1 Enrollment (VEDS classification) USOE 2-digit code	- Limited to sex designation and minorities	Suggestions & recommendations of the technical assistance staff were studied by the vocational education personnel and brought to the attention of the VEES	Under Study
2.2 Enrollment (VEDS classification) USOE 6-digit code	- Limited to sex designation and minorities		
3. Process			
3.1 Quality of instructional offerings	- Limited to disadvantaged and handicapped	Suggestions & recommendations of the technical assistance staff were studied by vocational education personnel & brought to the attention of the VEES	Under study for possible incorporation in the existing evaluation instruments
3.2 Capacity condition of facilities & equipment	- do -		
3.3 Guidance & counseling	- do -		
3.4 Placement & follow-up services	- do -		
4. Outcomes			
4.1 Student Achievement	- None	- VEES approved measurement of special population student achievement for districts wishing to participate	- Instrumentation being developed
4.2 Successful program completers	- None		
4.3 Succesful placement	- None	- FUSE system being developed to meet 4.2 to 4.4.	- Instrumentation being developed
4.4 Successful employment over time	- None		

Figure 13. An end-of-the-year profile of the California secondary vocational education evaluation system.

Postsecondary. The California Postsecondary Vocational Evaluation System with its COPES and SAM was determined to have the following strengths and weaknesses:

1. The ability of COPES to determine program accessibility focused on the issue of sex equity and architectural barriers for the handicapped.

   Recommendations Made: The coverage of COPES instruments should be expanded in order to examine program accessibility across all special population subgroups (women, limited English speaking, minority, disadvantaged, and handicapped) in terms of facility, educational, and societal factors. It is further suggested that PAR address program accessibility, especially local school efforts to remove attitudinal and societal barriers.

2. SAM has the ability to determine participation of special populations not only for compliance but also for program improvement. However, enrollment of the various categories of special populations was determined at the USOE two-digit codes only in view of the unresolved difficulty associated with the reporting of postsecondary enrollment at the USOE six-digit code.

   Recommendations Made: SAM needs to demonstrate its ability to collect and disseminate data concerning handicapped enrollment by instructional settings, categories of disadvantaged and handicapped enrollment, and limited English-speaking enrollment by USOE six-digit code.

3. COPES has the ability to identify additional services for all special populations. However, the technical assistance staff had not been able to evaluate any COPES report on the subject.

   Recommendations Made: COPES must report specific process evaluation of programs and services for special populations. In addition it should also include responses of special population students. This may mean altering the COPES student respondent sampling plan. It must include a definite proportion of the major special population subgroups and their respective responses must be separately treated in the COPES reports.

4. SAM does not have the ability to measure program outcomes including a longitudinal study of vocational program completers and leavers. Further, the state did not have any system for testing student achievement in postsecondary vocational programs.

Recommendations Made: A system of determining employer satisfaction and measuring student achievement for both regular students and special populations must be planned, tested, and implemented if the California Postsecondary Vocational Evaluation system is to comply with the Education Amendments of 1976.

Technical Assistance Provided and Results

First Quarter (February and March only)

- Finalized memorandum of understanding between the National Center and the Office of the Chancellors regarding the technical assistance project for Year II.

Second Quarter

- Analysis of the state's ability to evaluate programs and services for special populations was started in April. Activities included:
  - collecting and analyzing pertinent data and documents from the state;
  - interviewing state officials concerned with the evaluation of special populations enrolled in vocational programs.
- Preliminary report was made and sent to the state during the second week in May. The state was also furnished with copies of the "Evaluation Matrix" and the summary of pertinent legislation developed by the technical assistance staff.
- No written reply was received from the state during this period.

Third Quarter

- A visit was made during the second week of July to discuss with the vocational evaluation specialist of the postsecondary system and some of his staff the basis/criteria of the analysis study with emphasis on requirements and results of the analysis. Instead of reacting directly to the total report, the specialist requested more information on how the postsecondary system could meet VEDS requirements. In this regard, a detailed discussion was made on the VEDS requirement and the limitation of the postsecondary system.

- California finalized its plan for a longitudinal follow-up study of vocational education students including special populations. Project director was requested to serve as a member of the advisory committee.

Fourth Quarter

- Visited California in the third week of October and conferred with the postsecondary evaluation consultant regarding the progress of the state in implementing the recommendations of the technical assistance staff.

- Visited the state in the first week of November to attend a meeting on SAM's longitudinal follow-up study of vocational education program completers and leavers.

Colorado

Summary and Recommendations

The Colorado vocational evaluation system with its Supervisory Checklist, Comprehensive Program Review, and MIS had the following strengths and limitations with regard to its ability to evaluate programs and services for special populations:

1. Information collected on program accessibility was primarily concerned with the determination of physical barriers for the handicapped and sex equity in recruitment and selection of students.

   Recommendations Made: Determination of program accessibility needs to be expanded to include all special population subgroups in such areas as facility factors, educational factors, and societal factors. Decisions must be made with regard to the specific data

Information Collected	Start of Technical Assistance April 1979	Action Taken April - December 1979	Status December 30, 1979
1. Program Accessibility			
1.1 Facility factors	- Limited to architectural barriers	Suggestions & recommendations were being studied	- Same
1.2 Educational factors	- Limited to sex equity		- Same
1.3 Societal factors	- None		- Same
2. Participation			
2.1 Enrollment (VEDS classification) USOE 2-digit code	- Complete except instructional settings	- Being studied	- Will initiate
2.2 Enrollment (VEDS classification) USOE 6-digit code	- None	- Asked further clarifications from VEDS due to technical difficulties	- Status quo
3. Process			
3.1 Quality of instructional offerings	- Limited	Suggestions & recommendations were being studied	Plans to initiate process of items 3.1 to 3.4
3.2 Capacity condition of facilities & equipment	- Limited		
3.3 Guidance & counseling	- Limited		
3.4 Placement & follow-up services	- Limited		
4. Outcome			
4.1 Student Achievement	- None	- No action	- Same
4.2 Successful program completers	- Limited	- Planning & development of a longitudinal follow-up study of program completers and leavers	- Testing of instruments
4.3 Succesful placement	- Limited		
4.4 Successful employment over time	- None		

Figure 14. An end-of-the-year profile of the California postsecondary vocational education evaluation system.

which should be collected by the Comprehensive Program Review (CPR), supervisory checklist, and institutional application plan. It is important that the state get a complete picture of program accessibility.

2. Data collected on participation of special populations satisfied VEDS requirements except handicapped enrollment by instructional settings.

   Recommendations Made: MIS forms must be modified to include data on handicapped enrollment instructional settings.

3. Process evaluation was targeted principally for regular students.

   Recommendations Made: The Education Amendments of 1976 require process evaluation of programs and services for all special population categories. This means that a state should be able to compare or contrast regular students and special populations in terms of quality and availability of instructional offerings; guidance, counseling, placement, and follow-up services; and capacity and condition of facilities and equipment. Modification of the CPR instruments and supervisory checklists are, therefore, recommended in this regard.

4. Data collected on vocational program completers and leavers satisfied VEDS data requirements except that for employment over a period of time. Further, the state did not have the ability to measure student achievement with standard proficiency measures such as criterion-referenced tests.

   Recommendations Made: The follow-up system of the state must be upgraded to include a longitudinal study of special population program completers and leavers. Further, necessary modifications need to be made in the computer programming to enable the state to compare regular and special populations. The state also needs to plan for a state initiated testing of student achievement if it is to comply with the Education Amendments of 1976.

Technical Assistance Provided and Results

First Quarter (February and March only)

- Finalized memorandum of understanding with Colorado regarding Technical Assistance in Evaluation for Year II.

Second Quarter

- Analyzed the state's ability to evaluate programs and services for special populations. Activities included
  - collecting and analyzing pertinent data and documents from the state;
  - interviewing state personnel concerned with the evaluation of special populations enrolled in vocational programs.
- Preliminary analysis report was made and sent to the state for reaction. The state was also furnished copies of the "Evaluation Matrix" and of pertinent legislation summary developed by the technical staff.

Third Quarter

- A visit was made by the project director during the second week of July to discuss with state officials the basis of the analysis report, mandated evaluation requirements, evaluation matrix, and the results of the study.
- Colorado responded with favorable written comments concerning the report.
- A final report and recommendations were made. The state was furnished a copy. Reaction of the state to the recommendations was also favorable.
- Colorado asked specific assistance in the modification/revision of evaluation instruments that were used.
- A detailed critique including specific suggestions for revision on the supervisory checklists, CPR instrument, and institutional application plan was made and sent.

Information Collected	Start of Technical Assistance April 1979	Actions Taken April - December 1979	Status December 30, 1979
1. Program Accessibility			
1.1 Facility factors	- Limited to physical barriers for the handicapped	Suggestions & recommendations were studied and revision of instruments were started	- Being tested
1.2 Educational factors	- None		- Being tested
1.3 Societal factors	- None		- None
2. Participation			
2.1 Enrollment (VEDS classification) USOE 2-digit code	- Complete except instructional settings	Complied with all the VEDS data requirements	- Complete
2.2 Enrollment (VEDS classification) USOE 6-digit code	- do -		- Complete
3. Process			
3.1 Quality of instructional offerings	Items 3.1 to 3.4 were limited to regular students in mixed class settings	Suggetions & recommendations were being studied and revision of evaluation instruments were started	Evaluation instruments are being tested
3.2 Capacity condition of facilities & equipment			
3.3 Guidance & counseling			
3.4 Placement & follow-up services			
4. Outcomes			
4.1 Student Achievement	- None	- Recommendations studied	- Status quo
4.2 Successful program completers	- Complete		- Complete
4.3 Succesful placement	- Complete		- Complete
4.4 Successful employment over time	- None	- Recommendations studied	- Planning stage

Figure 15. An end-of-the-year profile of the Colorado vocational education evaluation system.

Fourth Quarter

- During this period, Colorado reorganized the Occupation Education Division. This included redefinition of roles and responsibilities of the branches and sections under the division. Further, some personnel were transferred. In view of the foregoing developments, the state vocational education evaluation personnel made only few significant accomplishments. Suggestions and recommendations for improvement were studied, and revisions of the evaluation instruments and program application guidelines were started.

Connecticut

Summary and Recommendations

The Connecticut Vocational Evaluation system with its Self-Evaluation and MIS components had the following strengths and weaknesses in its abiliy to evaluate programs and services for special populations:

1. Data collected on program accessibility were limited to certain special population subgroups in such items as program publicity, recruitment, and diversity of program offerings.

   Recommendations Made: There is a need to expand the coverage of the self-evaluation instrument in the determination of program accessibility. Program accessibility must be examined across all special population subgroups in terms of facility, educational, and societal factors.

2. Connecticut enrollment data satisfied the VEDS requirements except for the following: handicapped enrollment by instructional settings, categories of disadvantaged enrollment, and limited English proficiency enrollment.

   Recommendations Made: The ability of Connecticut to determine participation of special populations enrolled in vocational programs must be upgraded. Necessary modifications must be made in the enrollment forms and computer programming to

enable the state to collect and disseminate data regarding handicapped enrollment by instructional settings, categories of disadvantaged enrollment, and limited English proficiency enrollment by USOE six-digit and two-digit codes.

The ability of the Department of Education Data System to identify special populations enrolled in vocational education was limited to certain subgroups. It is, therefore, recommended that the Division of Vocational Education continue to negotiate with the Department of Education in terms of the identification of all special population subgroups in vocational education programs. The present mechanism may be most advantageous in terms of cost. At the same time, it enables the Division of Vocational Education to see the extent to which its programs serve the total special populations who are in school.

3. Process evaluation was limited to the examination of facilities and equipment for the handicapped and the review of curriculum materials for the handicapped.

   Recommendations Made: There is a need to restructure the self-evaluation instrument and to make methodological modifications to enable the state to compare and contrast special populations and regular students in terms of quality of instructional offerings; guidance, counseling, placement, and follow-up services; and capacity and condition of facilities and equipment.

4. The state has the capacity and ability to meet VEDS data requirements except for the follow-up of vocational graduates by racial/ethnic, sex, and handicapped designations, and determination of employer satisfaction. At the time of the study, the state did not have the ability to measurestudent achievement.

   Recommendations Made: Necessary modifications must be made in the follow-up forms being used to enable the state to collect data on handicapped vocational graduates as required by VEDS. Furthermore, a system of determining employer satisfaction, successful employment over time, and measuring student achievement must be planned, tested, and implemented

if Connecticut is to comply with the mandate of the Education Amendments of 1976.

Technical Assistance Provided and Results

First Quarter

- o No activity. Connecticut was not yet selected as a cooperating state.

Second Quarter

- o Finalized memorandum of understanding between the National Center and Connecticut for the Technical Assistance Project on Year II.
- o Oriented state vocational evaluation staff regarding objectives of the project.
- o Set preliminary time tables for the technical assistance activities with the state.

Third Quarter

- o Analyzed the state's ability to evaluate programs and services for special populations. Activities included
  - collecting and analyzing pertinent data and documents from the state;
  - interviewing state officials concerned with evaluation of programs and services for special populations.
- o Preliminary analysis report was prepared and sent to the state.
- o State was also furnished with the "Evaluation Matrix" and the summary of pertinent laws on evaluation of vocational programs.

Fourth Quarter

- o Final analysis report and recommendations were sent to the state.
- o Project director visited the state to follow-up recommendations and plan with the state vocational education evaluation personnel future technical assistance.

Information Collected	Start of Technical Assistance April 1979	Actions Taken April - December 1979	Status December 30, 1979
1. Program Accessibility			
1.1 Facility factors	- Limited to architectual barriers for the handicapped	No significant action was taken	- Status quo
1.2 Educational factors	- Limited to recruitment		- Status quo
1.3 Societal factors	- None		- Status quo
2. Participation			
2.1 Enrollment (VEDS classification) USOE 2-digit code	- Limited to sex designation, minorities, & handicapped	Suggestions & recommendations were studied. Explored with the Education Department regarding the possibility of using the latter's data to comply with VEDS data req.	Negotiations with Education Department is continuing
2.2 Enrollment (VEDS classification) USOE 6-digit code	- do -		
3. Process			
3.1 Quality of instructional offerings	- Limited to review of materials to overcome sex bias	No significant action was taken	- Status quo
3.2 Capacity condition of facilities & equipment	- Limited to accessibility for the handicapped		- Status quo
3.3 Guidance & counseling	- None		- Status quo
3.4 Placement & follow-up services	- None		- Status quo
4. Outcomes			
4.1 Student Achievement	- None	- No action	- Status quo
4.2 Successful program completers	- Limited to sex designation, minorities	Suggestions & recommendations were studied	Under planning
4.3 Succesful placement	- do -		
4.4 Successful employment over time	- None		

Figure 16. An end-of-the-year profile of the Connecticut vocational education evaluation system.

CHAPTER VIII

GENERALIZATIONS AND RECOMMENDATIONS

This chapter presents the major generalizations regarding the four assisted states' abilities to evaluate programs and services for special populations enrolled in vocational education programs. In addition, general recommendations are also made for other states that may encounter similar problems.

Generalizations

1. Determination of program accessibility is a common problem among the four assisted states. Program accessibility is generally determined in terms of sex designations and handicapping conditions. Further, states have problems complying with the requirements of the Office of Civil Rights.

2. Determining participation of special populations enrolled in vocational programs through compliance with the VEDS data requirements poses little problem at the secondary level. The four assisted states are at different stages of implementation of an information system, with Colorado in the most advanced stage of development. However, at the postsecondary level, compliance with the VEDS data requirements is still fraught with technical difficulties as demonstrated by the California case.

3. Identifying additional services for special populations is a common problem among the four assisted states. Information on additional services is generally limited to the handicapped and women to the exclusion of limited English proficiency (LEP), minority, and disadvantaged individuals. Further, such areas as guidance, counseling, and placement for special populations are not generally included in the evaluation.

4. Measuring student outcomes is a common problem among the four assisted states. This is especially critical

in terms of complying with the Education Amendments of 1976 which mandated that states measure student achievement with standard proficiency examinations. Further, states have a common problem of conducting longitudinal follow-up studies, although California is starting to develop such a follow-up at both secondary and postsecondary levels.

5. The limitations, some of which are very serious, in the abilities of the four assisted states to evaluate programs and services for special populations can be attributed to the following:

   a. Failure of the states to identify the key elements of an evaluation system which can serve both planning and legislative requirements.

   b. Lack of systematic, flexible, and well-defined written plans for vocational education evaluation systems. As a result, some states are faced with communication problems and lack of coordination between the different units of performing vocational education at the state level.

Recommendations

The analysis of the state's ability to evaluate its programs and services for special populations finally comes down to the capacity to generate certain units of data and information related to access, process, participation, and outcomes. This led the National Center project staff to the conclusion that "evaluation is information" i.e., evaluation capability depends on the state's ability to collect, store, analyze, compare, organize, and recall information.

Thus, any state which is planning for evaluation improvement should start by determining what it is they, and those they are accountable to, will accept as evidence of program effectiveness. Until this question is answered neither program operators or evaluators have any rational basis upon which to proceed.

After is has been determined what the criteria of effectiveness are, the present data and information collection instruments and procedures should be examined to determine the extent to which they produce the needed information. Instruments and procedures should then be revised or developed to fill in the gaps in the existing system.

The presentation of data and information on program effectiveness should be viewed as a guide to action. This process should be constructed on the premise that certain programs are less than fully effective in specified measures and that lack of effectiveness is due to certain conditions which should be corrected by specified actions.

Finally, implementing of the recommended actions and observations of the results completes the evaluation effort. (This entire process will be repeated several time.)

Thus, the following recommendations are given:

1. Criteria of effectiveness stated in measurable or observable program outcomes should be specified.

2. Information and data collecting and processing procedures should be reviewed and revised to provide evidence of effectiveness.

3. The best that is known about what causes quality in programs should be applied to those parts of the program which are not performing properly.

4. Procedures for assisting programs to make the changes expected to increase effectiveness should be established.

5. Close observation should be maintained to assess the extent to which the steps taken above have resulted in improved program outcomes.

APPENDIX A

STATE AGENCY EVALUATION COMPLIANCE REQUIREMENTS TO FEDERAL LEGISLATION AND RULES AND REGULATIONS FOR SPECIAL POPULATIONS

State personnel have expressed concern with regard to federal compliance for vocational education evaluation units of state agencies. The outline that follows presents items of concern which must be evaluated to meet federal compliance requirements and includes referenced sources and actual citations as found in the law and rules and regulations of pertinent laws.

Two things should be noted pertaining to compliance required as cited below: 1) citations cited are those of direct concern to state agency evaluation units and 2) state agency personnel are cautioned that compliance does not constitute the meeting of necessary criteria of an effective evaluation system.

General Responsibilities of State Agencies

Items	Authority	Citations
1. General	Sec. 104.402 (R & R of Ed. Amend. of 1976)	The state board shall, during the five-year period of the state plan evaluate in quantitative terms of effectiveness of each formally organized program or project supported by Federal, State and local funds
2. Compliance Responsibilities	Part 80. II-B (R & R of CP Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	The State agency responsible for the administration of vocational education programs must adopt a compliance program to prevent, identify and remedy discrimination on the basis of race, color, national origin, sex or handicap by its subrecipients. (A "subrecipient," in this context, is a local agency or vocational education center that receives financial assistance through a State agency.)

Items	Authority	Citations
		This compliance program must include: 1. Collecting and analyzing civil rights related data and information that subrecipients compile for their own purposes or that are submitted to State and Federal officials under existing authorities; 2. Conducting periodic compliance reviews of selected subrecipients (i.e., an investigation of a subrecipient to determine whether it engages in unlawful discrimination, notifying the subrecipient of steps it must take to attain compliance and attempting to obtain voluntary compliance; 3. Providing technical assistance upon request to subrecipients. This will include assisting subrecipients identify unlawful discrimination and instructing them in remedies for and prevention of such discrimination; 4. Periodically reporting its activities and findings under the foregoing paragraphs, including findings of unlawful discrimination under paragraph 2, immediately above, to the Office for Civil Rights.
A. ACCESS		
1. Facility Access		
1.1 Definition	Subpart A Sec. 84.3 (i) (R & R of P.L. 93-112 as amended)	(i) "Facility" means all or any portion of buildings, structures, equipment, roads, walks, parking lots, or other real or personal property or interest in such property.

Items	Authority	Citations
1.2 Architectural & equipment	Part 80-IV N(3) (R & R of CP Resp. fr: title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972 & Sec. 504 of the R.A. of 1973)	Recipients may not deny handicappped students access to vocational education programs or courses because of architectural or equipment barriers, or because of the need for related aids and services or auxillary aids.
1.3 Site location	Subpart A. Sec. 84-4 (R & R of P.L. 93-112 as amended)	In determining the site or location of a facility, an applicant for assistance or a recipient may not make selections (i) that have the effect of excluding handicapped persons from, denying them the benefits of, or otherwise subjecting them to discrimination under any program or activity that receives or benefits from Federal financial assistance or (ii) that have the purpose or effect of defeating or substantially impairing the accomplishment of the objectives of the program or activity with respect to handicapped persons.
1.4 Site selection	Part 80. IV-B (R & R of CP Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972 & Sec. 504 of the R.A. of 1973)	State and local recipients may not select or approve a site for a vocational education facility for the purpose or with the effect of excluding, segregating, or otherwise discriminating against students on the basis of race, color, or national origin. Recipients must locate vocational education facilities at sites that are readily accessible to both nonminority and minority communities, and that do not tend to identify the facility or program as intended for non-minority or minority students.

Items		Authority	Citations
1.5	Modification	Part 80. IV-D (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	A recipient may not add to, modify, or renovate the physical plant of a vocational education facility in a manner that creates, maintains, or increases student segregation on the basis of race, color, national origin, sex, or handicap.
1.6	Comparable facilit.	Part 80. VI-D (R & R of CR Resp. fr: Title VI of the CRA of the 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients must provide changing rooms, showers, and other facilities for students of one sex that are comparable to those provided to students of the other sex.
1.7	Housing opportunities	Part 80. VI-C (R & R of CR Resp. fr: Title VI of the CRA of the 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients must extent housing opportunities without discrimination based on race, color, national origin, sex or handicap. This obligation extends to recipients that provide on-campus housing and/or that have agreements with providers of off-campus housing. In particular, a recipient postsecondary vocational education program that provides on-campus or off-campus housing to its non-handicapped students must provide, at the same cost and under the same conditions, comparable convenient and accessible housing to handicapped students.

Items		Authority	Citations
2. Educational Access			
2.1	Recruitment	Part 80 V-C (R & R of CR Resp. fr: Title VI of the CRA of the 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients must conduct their student recruitment activities as not to exclude or limit opportunities on the basis of race, color, national origin, sex, or handicap. Where recruitment activities involve the presentation or portrayal of vocational and career opportunities, the curricula and programs described should cover a broad range of occupational opportunities and not be limited on the basis of the race, color, national orgin, sex, or handicap of the students or potential students to whom the presentation is made. Also, to the extent possible, recruiting teams should include persons of different races, national origins, sexes, and handicaps.
2.1.1	Public notification	Part 80. IV-D (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Prior to the beginning of each school year, recipients must advise students, parents, employees and the general public that all vocational opportunities will be offered without regard to race, color, national origin, sex, or handicap. Announcement of this policy of non-discrimination may be made, for example, in local newspapers, recipient publications and/or other media that reach the general public, program beneficiaries, minorities (including national origin minorities with limited English language skills), women, and handicapped persons. A brief summary of program offerings and admission criteria should be included in the announcement; also the name, address and telephone number of the person designated to coordinate Title IX and Section 504 compliance activity.

Items		Authority	Citations
			If a recipient's service contains a community of national origin minority persons with limited English language skills, public notification materials must be disseminated to that community in its language and must state that recipients will take steps to assure that the lack of English language skills will not be a barrier to admission and participation in vocational education programs.
2.1.2	Promotional efforts	Part 80. V-E (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients must not undertake promotional efforts (including activities of school officials, counselors, and vocational staff) in a manner that creates or perpetuates stereotypes or limitations based on race, color, national origin, sex or handicap.
2.2	Admission criteria	Part 80. IV-A (R & R of CP Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Criteria controlling student eligibility for admission to vocational education schools, facilities and programs may not unlawfully discriminate on the basis of race, color, national origin, sex, or handicap. A recipient may not develop, impose, maintain, approve, or implement such discriminatory admissions criteria.

Items		Authority	Citations
2.2.1	Eligibility based on residence	Part 80. IV-C (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients may not establish, approve or maintain geographic boundaries for a vocational education center service area or attendance zone, (hereinafter "service area"), that unlawfully exclude students on the basis of race, color, or national origin.
2.2.2	Eligibility based on numerical limits (secondary)	Part 80. IV-F (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	A recipient may not adopt or maintain a system for admission to a secondary vocational education center or program that limits admission to a fixed number of students from each sending school included in the center's service area if such a system disproportionately excludes students from the center on the basis of race, sex, national origin, or handicap. (Example: Assume 25 percent of a school district's high school students are black and that most of those black students are enrolled in one high school; the white students, 75 percent of the district's total enrollment, are generally enrolled in the five remaining high schools. This paragraph prohibits a system of admission to the secondary vocational education center that limits eligibility to a fixed and equal number of students from each of the district's six high schools.)

Items		Authority	Citations
2.2.3	Eligibility based upon student option (race, national origin and sex)	Part 80. IV-H (R & R of CR Resp. fr: Title VI of the CRA of 1964. Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	A vocational education center, branch, or annex, open to all students in a service area and predominently enrolling minority students or students of one race, national origin or sex, will be presumed unlawfully segregated if: 1) it was established by a recipient for members of one race, national origin or sex; or 2) it has since its construction been attended primarily by members of one race, national origin or sex; or 3) most of its program offerings have traditionally been selected predominently by members of one race, national origin or sex.
2.2.4	Eligibility based on applicant evaluation	Part 80. VI-K (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients may not judge candidates for admission to vocational education programs on the basis of criteria that have the effect of disproportionately excluding persons of a particular race, color, national origin, sex, or handicap.
2.2.5	Eligibility based on language	Part 80. IV-L (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients may not restrict an applicant's admission to vocational education programs because the application, as a member of a national origin minority with limited English language skills, cannot participate in and benefit from vocational instruction to the same extent as a student whose primary language is English. It is the responsibility of the recipient to identify such applicants and access their ability to participate in vocational education.

Items		Authority	Citations
2.2.6	Access based on employment opportunities (handicapped only)	Part 80. IV-N (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Access to vocational programs or courses may not be denied handicapped students on the ground that employment opportunities in any occupation or profession may be more limited for handicapped persons than for non-handicapped persons.
2.2.7	Eligibility based on age	Public Law 94-135 Title III-Sec. 303	It is the purpose of this title prohibit unreasonable discrimination on the basis of age in programs and activities receiving Federal assistance, including programs in activities receiving funds under the State and Local Fiscal Assistance Act of 1972 (31 U.S.C. 1221 et seq.)
B.	PARTICIPATION		
1.	Enrollment of special populations	Sec. 104.116 (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	(a) The Commissioner and the Administrator of NCES will jointly develop information elements and uniform definitions for a national educaiton data reporting and accounting system. (b) This system will include information resulting from the evaluations under section 112(b) of the Act (Secs. 104.402 and 104.404) and other information on vocational: (1) Students (including information on their race and sex); (2) Programs; (3) Program completers and leavers; (4) Staff; (5) Facilities; and (6) Expenditures

Items	Authority	Citations
C. PROGRESS AND D. OUTCOMES		
1. General responsibility	Sec. 104.402 (R & R of P.L. 93-112 as amended)	The State board shall, during the five-year period of the State plan, evaluate in quantitative terms the effectiveness of each formally organized program or project supported by Federal, State, and local funds. These evaluations shall be in terms of: (a) Planning and operational processes, such as (1) Quality and availability of instructional offerings; (2) Guidance, counseling, and placement and follow-up services; (3) Capacity and condition of facilities and equipment; (4) Employer prticipation in cooperative programs of vocational education; (5) Teacher/pupil ratios; and (6) Teacher qualifications, (b) Results of student achievement as measured, for example, by; (1) Standard occupational proficiency measures; (2) Criterion referenced tests; and (3) Other examinations of students' skills, knowledge, attitudes, and readiness for entering employment successfully. (c) Results of student employment success as measured, for example, by: (1) Rates of employment and unemployment; (2) Wage rates; (3) Duration of employment; and (4) Employer satisfaction with performance of vocational education students as compared with performance of persons who have not had vocational education.

Items	Authority	Citations
		(d) The results of additional services, as measured by the suggested criteria under paragraphs (a), (b), and (c) of this section, that the State provides under the Act to these special populations: (1) Women; (2) Members of minority groups; (3) Handicapped persons; (4) Disadvantaged persons; and (5) Persons of limited English-speaking ability
2. Sex stereotyping	Sec. 104.75(e) (R & R of Ed. Amend. of 1976)	Review all vocational education programs (including work-study programs, cooperative vocational education programs, apprenticeship programs, and placement of students who have successfully completed vocational education programs) in State for sex bias.
3. Counseling materials	Part 80. V-A (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients must insure that their counseling materials and activities (including student program selection and career/employment selection), promotional, and recruitment efforts do not discriminate on the basis of race, color, national origin, sex or handicap.
4. Counselors responsibility (LESA & Hearing Impairment)	Part 80. V-D (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)	Recipients must insure that counselors can effectively communicate with national origin minority students with limited English language skills and with students who have hearing impairments. This requirements may be satisfied by having interpreters available.

	Items	Authority	Citations
5.	Work Study, Cooperative Vocational Education, Job Placement, and Apprentice Training	Part 80. VII-A (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973	A recipient must insure that (a) it does not discriminate against its students on the basis of race, color, national origin, sex, or handicap in making available opportunities in cooperative education, work study and job placement programs, and (b) students participating in cooperative education, work study and job placement programs are not discriminated against by employers or prospective employers on the basis of race, color, national origin, sex, or handicap in recruitment, hiring, placement, assignment to work tasks, hours of employment, levels of responsibility, and in pay.
6.	Accountability Report	Sec. 104.241 (a)(1) (R & R of Ed. Amend. of 1976)	Show the extent to which the State, during the fiscal year preceding the submission of the report, has achieved the goals of the approved five-year state plan, including a description in terms of the elements of Sec. 104.184.
7.	IEP (Handicapped)	Sec. 121.a34(a)	The State educational agency shall insure that each public agency develops and implements an individualized education program for each of its handicapped children.

References

1. Older American Amendment of 1975, Public Law 94-135. November 28, 1975.

2. Implementing Rules of Sec. 504 of the Rehabilitation Act of 1973, P.L. 93-112 as Amended. Federal Register, Vol. 42, No. 86, May 4, 1977. (R & R of P.L. 93-112 as amended)

3. Implemented of Part B of the Education for the Handicapped Act. Federal Register, Vol. 42, No. 163, August 23, 1977. (R & R of P.L. 94-142)

4. State Administered Programs and Comissioner's Discretionary Programs. Federal Register, Vol. 42, No. 191, October 3, 1977. (R & R of Ed. Amend. of 1976)

5. Part 116b - State Operated Programs for Handicapped Children. Federal Register, Vol. 43, No. 74, April 17, 1968. (R & R of Sec. 121 of Elem. & Sec. Ed. Act)

6. Vocational Education Programs. Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex and Handicap. Federal Register, Vol. 44, No. 56, March 21, 1979. (R & R of CR Resp. fr: Title VI of the CRA of 1964, Title IX of the Ed. Amend. of 1972, & Sec. 504 of the R.A. of 1973)

APPENDIX B

EVALUATION OF PROGRAMS AND SERVICES

FOR SPECIAL POPULATIONS

SELF-ASSESSMENT INSTRUMENT

Objectives: To access the states ability to:

1. Determine accessibility of programs for special populations
2. Identify services being provided for special populations
3. Determine participation of special populations in programs
4. Measure outcomes of programs and services for special populations

Direction: Kindly check the appropriate space of each criterion of interest using the rating scale below.

1	Needs Major Improvement	Conditions are below standards; needs additional emphasis
2	Needs Minor Improvement	Conditions are meeting standards; could stand minor improvement
3	Satisfactory	Conditions exceed minimum standards; practically needs little or no improvement

I. Ability to Determine Accessibility of Programs for Special Populations

Criteria

THROUGH ITS VOCATIONAL EVALUATION SYSTEM, THE STATE IS ABLE TO DETERMINE ACCESSIBILITY OF VOCATIONAL PROGRAMS FOR SPECIAL POPULATIONS AS INDICATED BY:

	Ratings	Years 79-80	80-81	81-82	82-83
1. Periodic review of facility factors that tend to increase accessibility of vocational programs.	3	____	____	____	____
	2	____	____	____	____
Evidence: The evaluation instrument(s) and evaluation report(s) include investigation of the facility factors specified by DHEW, Federal Register Vol. 44, No. 56, March 21, 1979:	1	____	____	____	____
1.1 Architectural and equipment					
1.2 Site location (non-discriminatory)					
1.3 Site selection (non-discriminatory)					
1.4 Modification of physical plant					
1.5 Comparable facilities					
1.6 Housing opportunities					
1.7 Topographical					
2. Periodic review of school policies/practices that tend to increase accessibility of vocational programs. These are:					
2.1 Recruitment procedures employed at the local school level	3	____	____	____	____
	2	____	____	____	____
Evidence: The evaluation instrument(s) and evaluation report(s) include investigation of the following recruitment procedures:	1	____	____	____	____
2.1.1 Public notification					
2.1.2 Promotional efforts					
2.1.3 Identification of potential students in school system					
2.1.4 Identification of potential students outside of the school system					
2.1.5 Parent motivation					

	Ratings	Years 79-80	80-81	81-82	82-83
2.2 <u>Local admission criteria</u> for special populations to enter into vocational programs	3	____	____	____	____
	2	____	____	____	____
<u>Evidence</u>: The evaluation instrument(s) and evaluation report(s) include investigation of the following discriminatory practices to avoid as specified by DHEW, Federal Register Vol. 44, No. 56, March 21, 1979:	1	____	____	____	____
2.2.1 Eligibility based on residence					
2.2.2 Eligibility based on numerical limits					
2.2.3 Eligibility based on student option (race, national origin and sex designation)					
2.2.4 Eligibility based on applicant evaluation					
2.2.5 Eligibility based on language					
2.2.6 Access based on employment opportunities (handicapped)					
2.2.7 Eligibility based on age					
2.3 <u>Diversity/adequacy</u> of local program offerings.	3	____	____	____	____
<u>Evidence</u>: The evaluation instrument(s) used and evaluation report(s) include investigation of the following factors:	2	____	____	____	____
	1	____	____	____	____
2.3.1 Adequacy of educational opportunities					
2.3.2 Diversity of program offerings					
2.3.3 Trained staff					
2.3.4 Modified course presentation (handicapped)					
2.3.5 Support services					
a. day care					
b. auxiliary aids					
c. remedial					
d. financial					
2.3.6 Program comprehensiveness					
- job, social, and employability skills					

	Ratings	Years 79-80	80-81	81-82	82-83
3. Periodic review of local school efforts to remove:					
3.1 Attitudinal barriers	3	____	____	____	____
Evidence: The evaluation instrument(s) and evaluation report(s) include investigation of local school efforts to remove attitudinal barriers such as:	2	____	____	____	____
	1	____	____	____	____
3.1.1 Stereotyping person's ability to do work 3.1.2 Personal negative self-image 3.1.3 Job stereotyping 3.1.4 Non-accepting attitudes in society					
3.2 Societal barriers including the promotion of equal opportunity in employment and promotion	3	____	____	____	____
	2	____	____	____	____
Evidence: The evaluation instrument(s) and evaluation report(s) include investigation of local school efforts to remove other societal barriers such as:	1	____	____	____	____
3.2.1 Discriminatory practices in hiring 3.2.2 Discriminatory practices in salary 3.2.3 Discriminatory practices in promotion 3.2.4 Discriminatory practices in public services					
4. The states has a well-defined system to increase accessibility of vocational programs.	3	____	____	____	____
	2	____	____	____	____
Evidence: A written state plan.	1	____	____	____	____

II. Ability to Determine Participation of Special Populations in Vocational Programs

Criteria	Ratings	Years 79-80	80-81	81-82	82-83
1. The state has a complete record of vocational program enrollment of the different categories of special populations and each category is further subdivided according to VEDS classification .	3	____	____	____	____
	2	____	____	____	____
	1	____	____	____	____

Evidence: State summary enrollment of special population enrollment in all vocational programs has the following data:

VEDS Classification:

1.1 Disadvantaged
- 1.1.1 Economically
- 1.1.2 Academically

1.2 Handicapped
- 1.2.1 Mentally retarded
- 1.2.2 Hard of hearing
- 1.2.3 Deaf
- 1.2.4 Speech impaired
- 1.2.5 Visually handicapped
- 1.2.6 Emotionally disturbed
- 1.2.7 Orthopedically impaired
- 1.2.8 Other health impaired
- 1.2.9 Specific learning disabled

1.3 Minorities
- 1.3.1 American Indian/Alaskian Native
- 1.3.2 Asian American/Pacific Islander
- 1.3.3 Black, not Hispanic
- 1.3.4 Hispanic
- 1.3.5 White, not Hispanic

1.4 Limited English Speaking
- 1.4.1 Spanish dialect
- 1.4.2 Italian dialect
- 1.4.3 Other

1.5 Sex Designation
- 1.5.1 Female
- 1.5.2 Male

Criteria	Ratings	Years 79-80	80-81	81-82	82-83
2. The state has a complete record of enrollment of special populations by program. Evidence: State summary special population enrollment data by USOE 6-digit and USOE 2-digit codes.	3	____	____	____	____
	2	____	____	____	____
	1	____	____	____	____
3. The state has a complete record of handicapped enrollment as to instructional settings. Evidence: Handicapped data as to instructional settings: Instructional Setting 3.1 regular class 3.2 mixed class 3.3 separate class 3.4 separate facility 3.5 other	3	____	____	____	____
	2	____	____	____	____
	1	____	____	____	____
4. The state has a well-defined system of determining participation of special population in vocational programs. Evidence: A well defined plan or reports of enrollment.	3	____	____	____	____
	2	____	____	____	____
	1	____	____	____	____

III. Ability to Identify Services for Special Populations

Criteria	Ratings	Years 79-80	80-81	81-82	82-83
THROUGH ITS VOCATIONAL EVALUATION SYSTEM, THE STATE IS ABLE TO IDENTIFY SERVICES FOR SPECIAL POPULATIONS AS INDICATED BY:					
1. Periodic review of the quality of instructional offerings for special populations including the capacity and condition of facilities and equipment for special populations and the use of bias-free materials.	3	____	____	____	____
	2	____	____	____	____
	1	____	____	____	____
Evidence: Inclusion of instruction related factors in the evaluation instrument(s) and a separate analysis and report on the subject in the evaluation reports.					
2. Periodic review of the quality of guidance and counseling for special populations including a review of possible discriminatory counseling materials and activities.	3	____	____	____	____
	2	____	____	____	____
Evidence: Guidance and counseling for special populations in the total evaluation system are included in the evaluation instrument(s) and evaluation report(s).	1	____	____	____	____

Criteria	Ratings	Years 79-80	80-81	81-82	82-83
3. Periodic review of the quality of placement services for special populations including a review of possible employer or prospective employer discrimination.	3	____	____	____	____
	2	____	____	____	____
Evidence: Placement service for special population is included in the evaluation instrument(s) and evaluation report(s).	1	____	____	____	____
4. Periodic review of other services	3	____	____	____	____
Evidence: Other services for special populations are shown included in the evaluation instrument(s) and evaluation report(s).	2	____	____	____	____
	1	____	____	____	____
5. A well defined system to identify services for special populations.	3	____	____	____	____
	2	____	____	____	____
Evidence: State evaluation plan includes identification of services for special populations	1	____	____	____	____

	Ratings	Years 79-80	80-81	81-82	82-83
IV. Ability to Measure Program Outcomes for Special Populations					
Criteria					
1. The state has data and information on the special population regarding the following:					
1.1 Successful Program Completions	3	____	____	____	____
Evidence: Follow-up report has the following data:	2	____	____	____	____
Successful Program Completion:	1	____	____	____	____
1.1.1 Grades 11 and 12 1.1.2 Postsecondary 1.1.3 Adult 1.1.4 Apprenticeship					
1.2 Student Placement	3	____	____	____	____
Evidence: Follow-up report has the following data:	2	____	____	____	____
Student Placement (completers/leavers-racial/ethnic/sex designation and handicapped):	1	____	____	____	____

1.2.1 Employed
- in field related to training
  a. civilian
  b. military
- in field not related to training
  a. civilian
  b. military
- salary rates
- employer satisfaction
- others

1.2.2 Unemployed
- seeking employment and not pursuing additional education
- not in labor force and not pursuing additional education

1.2.3 Pursuing Additional Education

1.2.4 Status Unknown

	Ratings	Years 79-80	80-81	81-82	82-83
1.3 Successful Employment Over Time	3	____	____	____	____
Zvidence: The follow-up report has the following data:	2	____	____	____	____
Successful Employment Over Time 1.3.1 Duration 1.3.2 Promotions 1.3.3 Salary Increases 1.3.4 Reactions to Training	1	____	____	____	____
2. The state has the ability to measure student achievement of special populations with standardized occupational proficiency measures, criterion-referenced tests, etc.	3	____	____	____	____
	2	____	____	____	____
	1	____	____	____	____
Evidence: State data showing results of student achievement are measured by standard proficiency measures, criterion-referenced tests, etc. Standardized instrument to measure student achievement.					

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